

VOL 82

NO. 7

textile bulletin

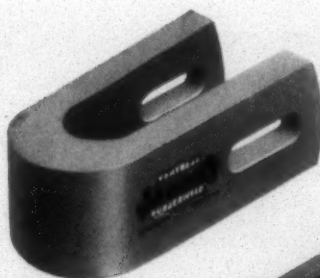
JULY • 1956

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JACOBS

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- **UNIFORMITY**
provides unvarying pick action
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construction gives extra strength
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Made entirely of
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Samples available

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out of denims

blues"

Most of the "blue notes" are taken out of weave rooms running on denim, where the looms are equipped with Veeder-Root Cut Meters.

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"The Name that Counts"

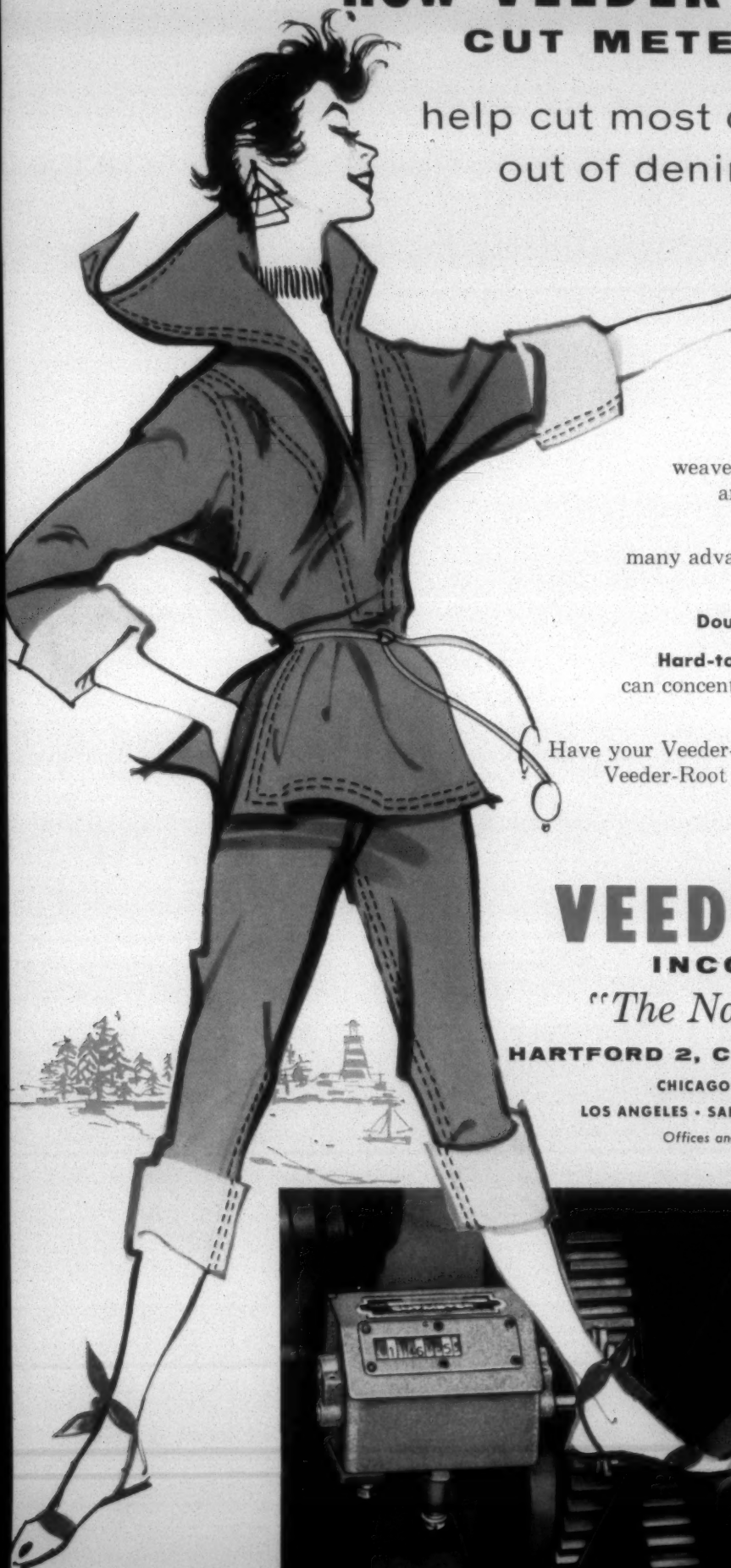


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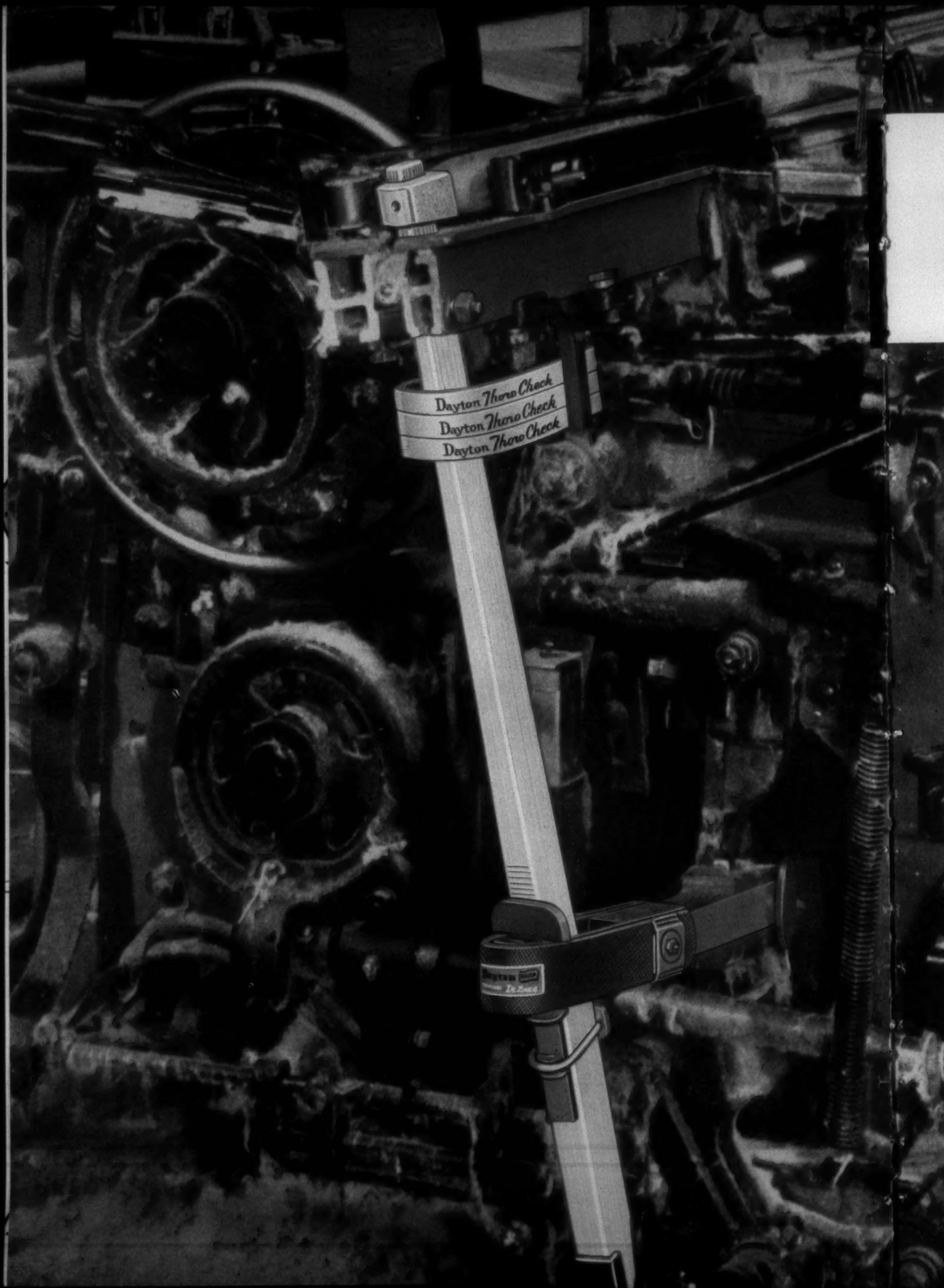
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Get double and triple service life at all 3 points of shock . . .

with this Dayton Picking Combination

In actual mill tests operating 'round the clock, five days a week, Dayton Thorobred Loop Pickers, ThoroCheck Endless Check Straps and Thorobred Deluxe Lug Straps lasted 2 to 3 times longer than other products doing the same job.

Dayton Thorobred Loop Pickers give double service, cushion millions of shuttle contacts without wear. Tilted construction assures perfect shuttle contact with less strain on the picker. Their flared bottom and tapered picker hole assures accurate seating without tearing the loop ply.

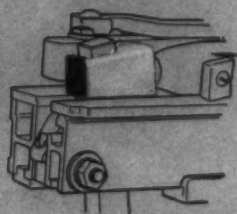
Dayton Endless ThoroCheck Straps in tests on X-2 looms functioned 24 hours a day, five days a week for 9 months without showing

any visible signs of wear or needing adjustment. Other straps lasted only 2-3 months. Revolutionary design gives graduated checking action—eliminates drag over stick. Never affected by temperature or humidity, Daytons assure fast Monday morning starts. Patented construction and design fully eliminate permanent elongation.

Dayton Thorobred Deluxe Lug Straps, in mill tests, lasted twice as long as other lug straps. Their one-piece construction eliminates weak connector links. The molded-in plug absorbs the terrific shock, protects expensive loom parts. Super-strength cords in line with thrust direction give greater durability, longer life. Also free of permanent elongation.

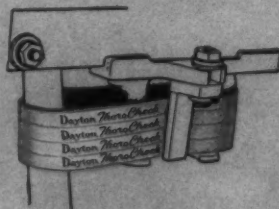
Reduce maintenance and downtime costs with the double and triple service life of Dayton loop pickers, check straps and lug straps. Call your Dayton Representative or write Dayton Rubber Co., Textile Div., 401 S. Carolina National Bank Building, Greenville, S. C.

Dayton Thorobred Loop Picker



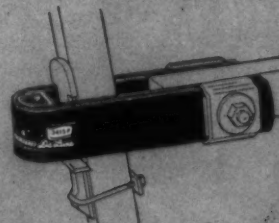
New Design! Narrow back eliminates wear on lay end strap.

Dayton ThoroCheck Straps



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Dayton Thorobred Deluxe Lug Straps



One-piece construction! No rivets or other parts to work loose.

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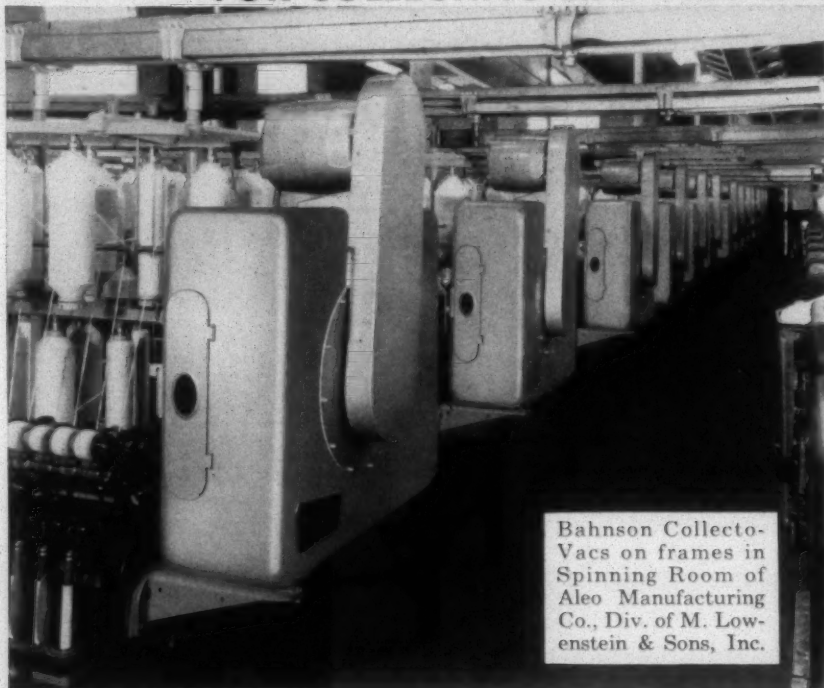
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Dayco and Dayton Thorobred Textile Products for better Spinning and Weaving.

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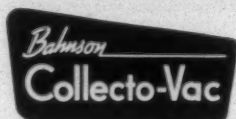
FOR COLLECTING LINT AND BROKEN ENDS



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find greater
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advantages with
the efficient
Bahnson
Collecto-Vac**

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LIST OF
USERS



**Mill-proved Collecto-Vac features
offer you more for your investment
as standard equipment**

IN MATERIALS: Attractive anodized aluminum flutes — *no warpage or cracking*. Rugged 14 gauge stamped steel collection box.

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(A scroll type fan is used with both designs.)

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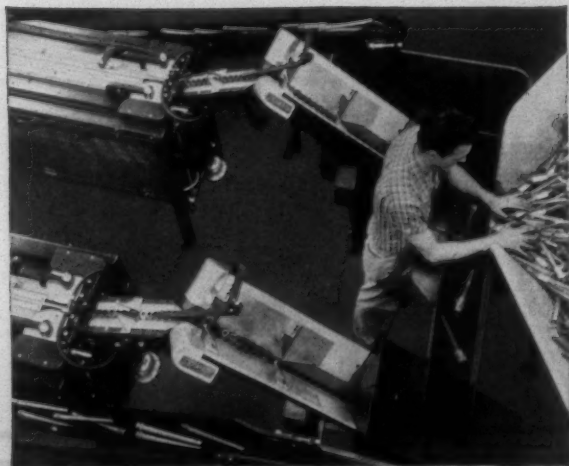


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Manufacturers of Card Clothing for 90 years
1866-1956



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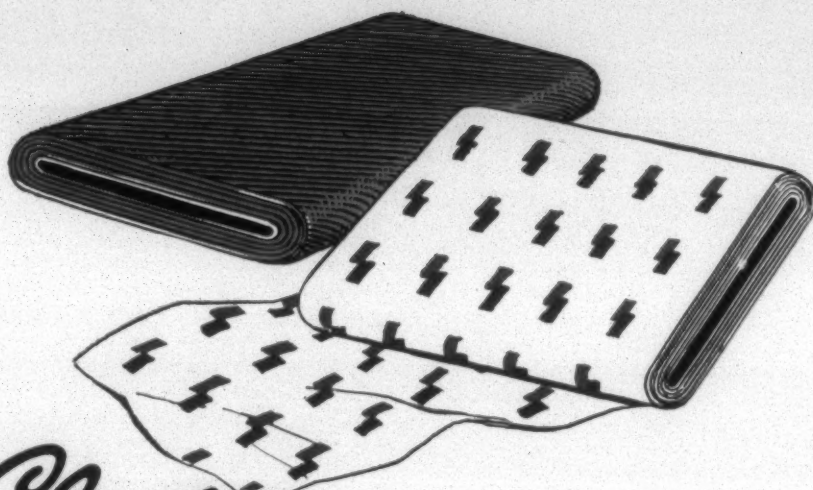
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- with your specific problems is
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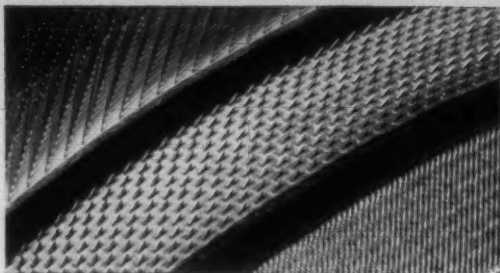
Quality products

FROM THE WORLD'S CORN CENTER



CLINTON CORN PROCESSING COMPANY
CLINTON, IOWA





Askworth Tips ON CARDING

No. 31 in a Series

CARD DOFFERS

The doffer on the cotton card is one of the final factors which determine the relative uniformity of the card sliver. You can make the most even inch-for-inch picker lap in the world, but if the doffer is out of round it will undo all the care and attention that has gone into the make-up of the picker lap. By putting into effect the following recommendations, you can eliminate any possibility of non-uniformity in card sliver chargeable to the doffer on the card:

1. Surface grinding the bare doffer prior to application of new clothing is fast becoming standard practice. Should you not be doing this in your own mill, we urgently recommend that you start immediately. Your source of supply on card clothing will furnish you bare cylinder grinders.
2. Not too much attention has been paid to the condition of doffer shafts, shrouds or bearings. In some mills it is common practice to make allowances for those that are worn and compensate for such wear when setting doffer to cylinder. When operating out of round doffers with worn shafts, shrouds or bearings, you cannot hope to produce an even sliver. A systematic check on these two points, with immediate corrective attention, is indicated.
3. While the doffer has never been considered as a cleaning unit, it does remove a considerable amount of pepper trash—depending on the length and condition of the doffer wire and the setting of doffer comb to doffer. This is easily substantiated by checking the accumulation of such waste on the doffer pan, located immediately under the doffer comb and doffer.
4. You can prove to your own satisfaction that doffer fillets with long wire, free of bruises, will do more cleaning and produce a more even sliver, by making a very simple check in your own mill. Compare the accumulation on the pans beneath the doffers equipped with good card clothing as against those worn from extensive grinding, which in addition to being short, are jammed or shedding or both.
5. The doffer comb is a very important adjunct to the doffer itself. Setting of comb to doffer is very important, and it is suggested that a periodic check be made on the setting quality of all doffer comb blades. Too much variation in setting of the blade at the doffer comb fingers, as opposed to space between fingers, prevents the proper removal of stock from the doffer and affects the amount of pepper trash removed from the stock being carded. Such comb blades should have immediate attention.
6. Check the teeth in the comb blades. Bent and rough teeth hang cotton, causing uneven sliver.
7. The comb driving mechanism, including the comb box, should be checked periodically, particularly for wear which affects setting of comb to doffer. This wear can be in the foot end comb stand or in the box itself.
8. The bonnet of the doffer not only protects the card room personnel from possible injury, but is also insurance against damaged doffer clothing. When it is correctly fitted and set, it controls the draft at this point. An inspection of your own doffer bonnets may reveal that some of these have been improperly installed and poorly fitted, which conditions should be corrected.

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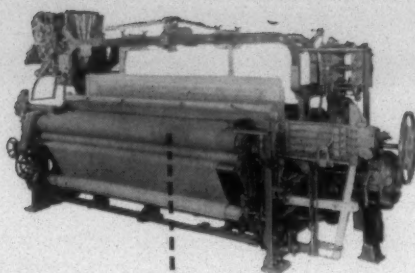
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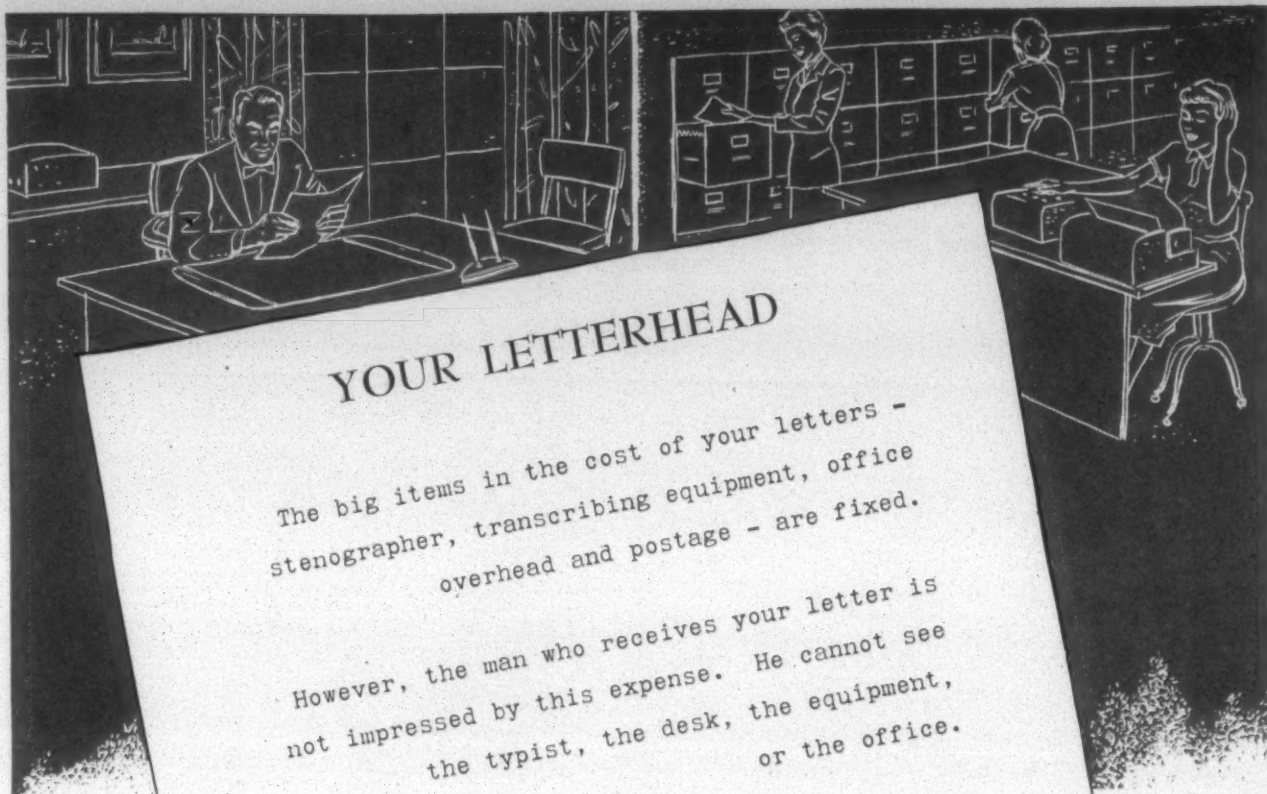
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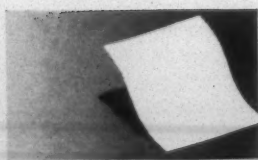
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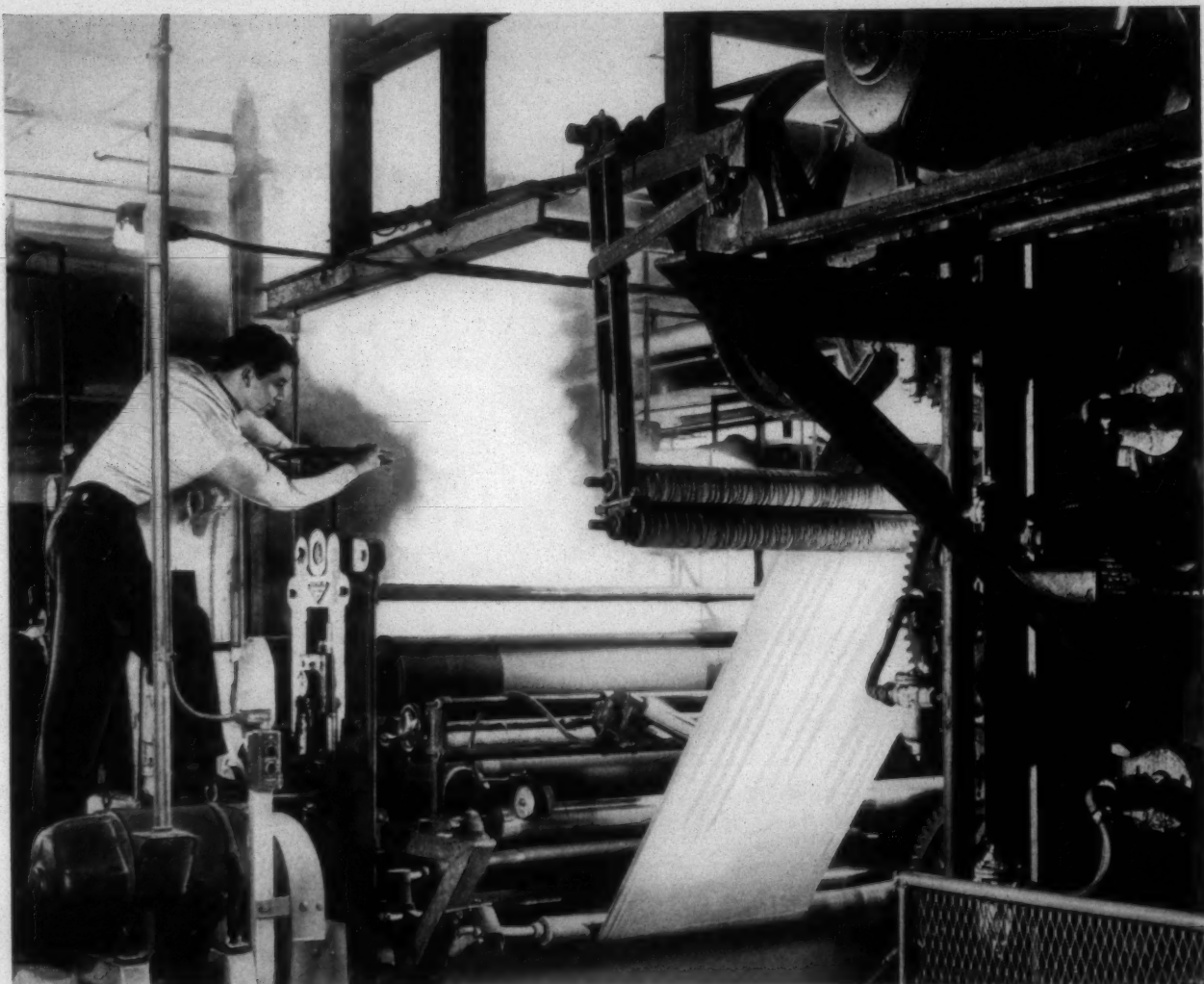
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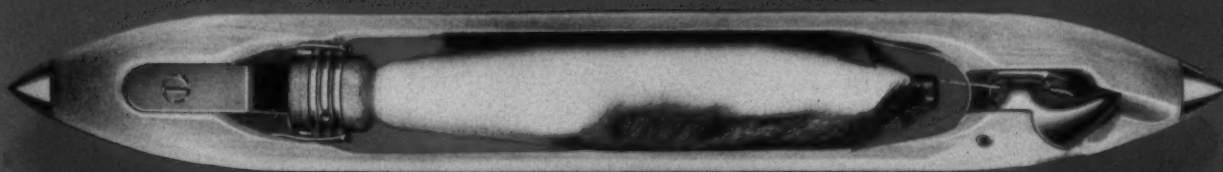
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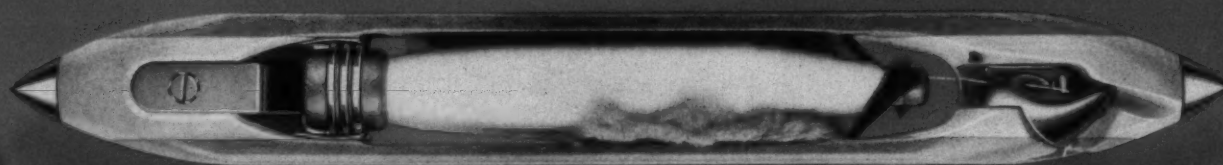
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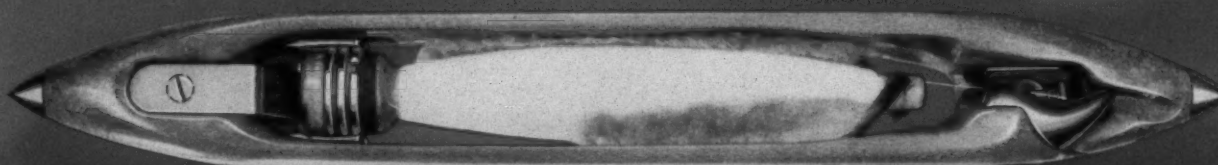
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"TRU-FORM"



"TRU-MOLD"



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Longer shuttle life and reduced maintenance are two distinct ways in which Draper shuttles aid in lowering weave room costs. The desire to furnish a shuttle that will meet exactly the conditions under which the mill plans to use it has resulted in the manufacture of a wide variety of Draper shuttles.

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shuttles incorporate the finest in materials and design. From all-dogwood to the completely new molded construction, each is engineered to offer *greater shuttle economy and improved loom operation.*

Lower your weaving costs . . . standardize on Draper shuttles, today.



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For open-wind packages, any type... the Leesona Roto-Coner[®]

This popular open-wind machine features versatility, high quality, and low cost production. It offers real opportunities for economy with large package spinning.

Here are some reasons why many leading mills have replaced obsolete winding equipment with Leesona Roto-Coner drum winders:

- The Roto-Coner produces every type of open-wind package. It winds onto paper cones for knitting; wood cones for warping; paper tubes for sales yarn; perforated tubes and springs for dyeing; wood tubes and cones for twisting.
- It winds cotton, spun synthetic staples, wool, worsted, linen

and blends. Several counts can be wound simultaneously on the same machine.

- Its Rotary Traverse — an exclusive one-piece combination driving drum and traverse guide — eliminates all moving parts connected with reciprocating guides, and reduces maintenance, assures uniform packages and top quality yarn.
- Users report annual costs for repair parts averaging as low as $\frac{1}{4}$ of 1% of the original investment.

Roto-Coner Winders are quiet and trouble-free, easy to operate and to maintain. For further facts on how these machines can benefit your own open-wind package operations, write for illustrated booklet.

23.5.16



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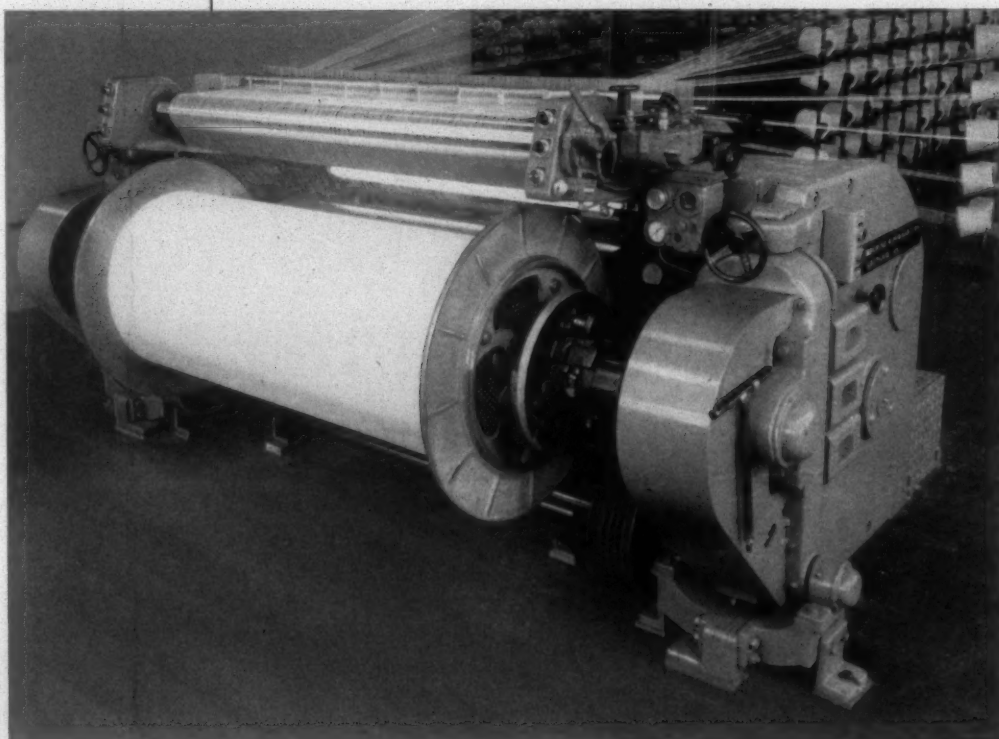
Winding and Twisting Machinery for Natural and Synthetic Yarns

"Not a single 'Blown' Dye Beam in 2 months"

Cocker No. SD-54 Warper

This warper has proven of exceptional value in producing dye beams of soft, even density throughout. It permits lower and even pressure in dyeing . . . quick and even dye penetration . . . increased speeds by 60% . . . and minimizes danger of blowing. "Not a blown beam in 2 months" is the report from one mill.

The air-controlled presser roll on the Model SD-54 can be set to any desired density — hard or soft — and accurately maintains that pressure from beginning to end. Horizontal traverse on comb and roll prevents channeling. Driving and braking beam from both ends eliminates backlash in starting or stopping. Patented differential yarn speed control, extra heavy duty bearings, electrically controlled doffing, and other valuable features make this the most serviceable warper for any yarn or purpose. Operates at speeds of 550 yds. per min. on dye beams and over 700 yds. on general warp beams.



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1215 Greene Ave., Montreal 6, Canada**

Visit Booths No. 830 and 831, Southern Textile Exhibition

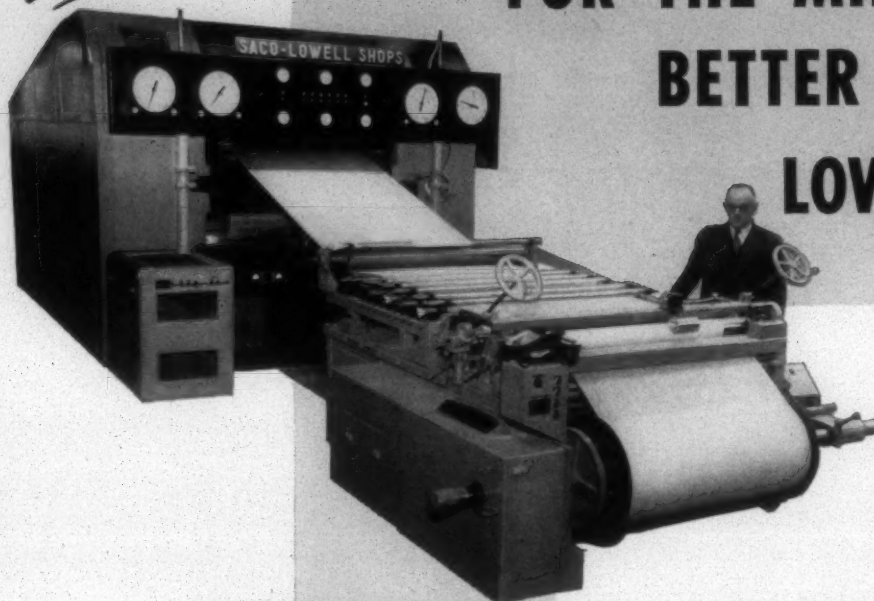


Machine and Foundry Co., Gastonia, N. C.

**WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE
WARP PREPARATORY EQUIPMENT**

IT'S NEW

**A HIGH PRODUCTION TOOL
FOR THE MILL SEEKING
BETTER CLOTH AT
LOWER COST...**



POSITROL* SLASHER by SACO-LOWELL

**ADAPTABLE FOR COARSE, MEDIUM AND FINE YARNS SPUN
FROM COTTON, SYNTHETIC, NATURAL FIBRE AND BLENDS.**

SACO-LOWELL'S POSITROL* SLASHER

*Its capabilities
include slashing:*

1. Warps containing
8000 ends of No.
90/1 combed
cotton.
2. Warps of acetate
filament, low-twist
75-denier acetate.

The new Saco-Lowell Positrol* Slasher is a universal tool for the sizing of warps. It has produced exceptional results on all types of yarn. Key to the slasher's ability to process all types of yarn is the Saco-Lowell Drying Unit. This unit is strong in structure, reasonable in dimensions and thoroughly insulated. There is minimum amount of warp yardage in dryer at one time. Larger quantities of guided air are handled in the most efficient manner from the standpoint of power and heat conservation.

The combination of a new drying unit with the Positrol* Slasher's new automatic magazine creel, improved size box, and new No. 45 head end result in a worthwhile increase in production per slasher and per man-hour, plus improvement in the overall quality of slashing.

A Saco-Lowell Engineer will be glad to give you complete information and prepare a "Forecast for Savings" based on a Positrol* Slasher installation — another step in your Saco-Lowellizing program.

A new catalog is just off the press — send for your copy.

*Reg. Trademark.

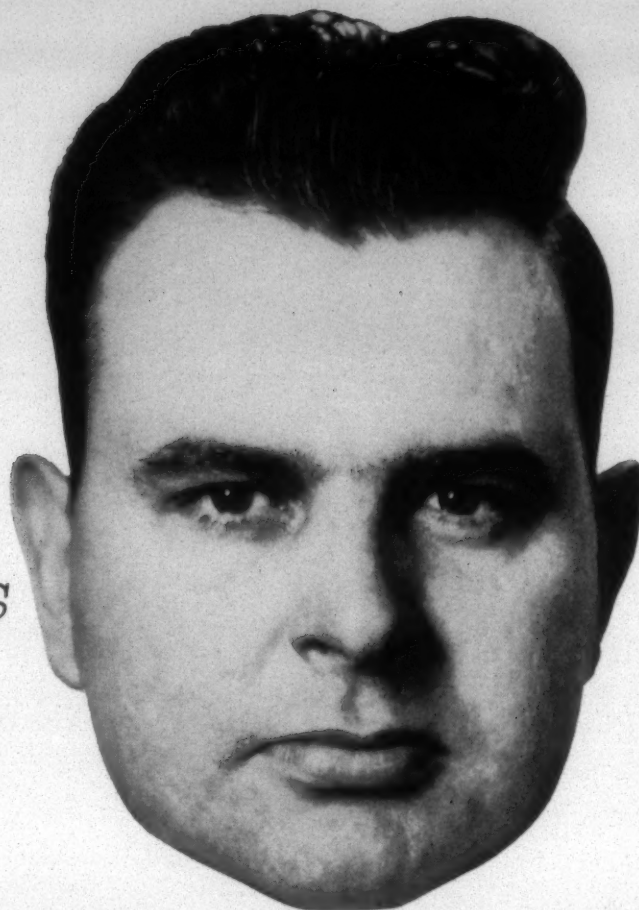
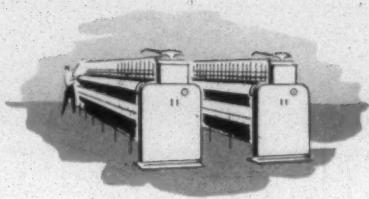


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*"...Higher loom speeds
made lubrication
difficult!"*

When a large Southern weaving plant recently had a problem in loom drive lubrication, Sinclair's Representative V. V. Motley, Jr. was asked for a recommendation. He reports:

"This plant had experienced difficulty in lubricating the gear trains that drive the looms. The reduction gears are shielded and the pinions rotate at about 1700 RPM. A grease could not be applied readily or satisfactorily; and, an oil did not provide the retention necessary for the desired lubrication period. In desperation, mixtures of oil and grease had been used in an attempt to lubricate the gears."

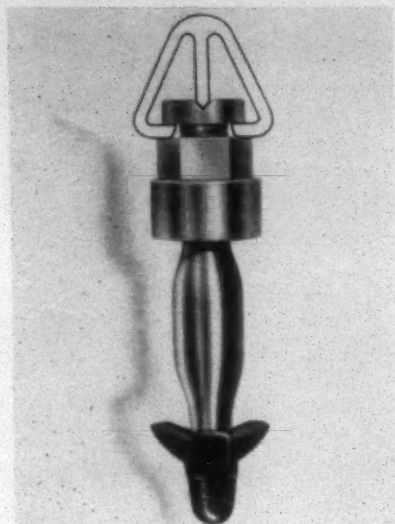
NEEDED: AN ADHESIVE OIL. Mr. Motley continues, "Having had experience with problems of this type, I recommended Sinclair DARTAC #15. I knew it would have the necessary body and adhesiveness needed to solve the problem. Trial runs at this plant were so successful that all four of the company's plants were switched to DARTAC" concludes Mr. Motley.

If you have a problem in textile lubrication, get the benefit of a Sinclair Representative's recommendation. Call a local Sinclair office or write to Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

SINCLAIR TEXTILE LUBRICANTS

For the Textile Industry's Use

Pneumafil Bobbin Holder



Tension-rite bobbins holder (Pneumafil Corp.)

A new type bobbin holder, known as the Tension-rite bobbin holder, is now being manufactured by Pneumafil Corp. The Tension-rite is said to be an entirely new kind of bobbin holder, one that maintains the desired constant tension, eliminates roving stretch and prevents roving slough-off without the use of drag arms. The new design conforms to the Lint Free Creel, the company points out, following the airfoil principle which eliminates the accumulation of lint.

The Tension-rite bobbin holder is simple in construction, consisting of only 5 parts. It is made of solid aluminum alloy with glasslike finish and features an exclusive Bolite bearing which provides a compensating tension. An entirely new type gripping head made of a flexible molded material is used, and Pneumafil points out that this gripping head not only holds the bobbin firmly but also acts as a vibration absorber in cases where spinning frames are located directly over weave rooms. Bobbins are easily creeled and removed from this new type gripping head, the company reports. Demand for the bobbin holder is said to be so great that sales will be limited to Pneumafil's customers purchasing the Lint Free Creel for at least the next 6 months.

(Request Item No. G-1)

Sandoz Brilliant Red

Sandoz Chemical Works Inc. announces the development of Pyrazol Fast Brilliant Red RA, a new Sandoz dye which yields bright reds on cotton and cellulosic fibers. The company points out that it has excellent building up properties, making it of special

interest to dyers of spun viscose fabrics. Its high degree of solubility recommends it for all types of closed machine dyeing, and it has good affinity for natural silk from acetic acid baths. The new product is described and illustrated in Sandoz Circular No. 1283, a copy of which can be obtained by using this journal's reader service request card.

(Request Item No. G-2)

Gas Fading Chamber

The gas fading chamber, originally developed by the United States Testing Co. in co-operation with the A.A.T.C.C. committee on atmospheric gas fading, for evaluation of atmospheric gas reactions on dyed textiles, is now being manufactured for direct sale to industry. The instrument is made of 2 models, the drum type, which conforms to specifications of the American Society for Testing Materials (D682-52), the American Standards Association (L-14 and L-22), and the American Association of Textile Chemists & Colorists; and the more compact squirrel cage model which meets requirements of the last two. Both instruments feature a corrosion-resistant chamber, self-sealing closure and exhaust vent which permit operation with a wide variety of gas fumes. By introducing special valve ports into the main supply line, it is possible to mix and feed controllable quantities of different gases to the chamber. In addition, the automatic rotation of samples in the chamber assists gas circulation and achieves uniform exposure conditions. Interior lighting permits observations to be recorded during progress of the test, and a dial thermometer enables testing to be accomplished at a known temperature.

(Request Item No. G-3)

Mona Finishing Agents

Mona Industries Inc. has announced the development of the following new products: Monabond, a new hand modifying resin; Monopolene A, an anionic emulsion of polyethylene; and Monopolene N, a non-ionic emulsion of polyethylene.

The company points out that the addition of Monabond to the present resin formulation results in a reduction of residual shrinkage, improved flat abrasion resistance, enhances the durability of the resin finish to washing or dry cleaning and gives added bulk, weight and fullness to the finished product.

Monopolene A serves as an effective softener and plasticizer for thermosetting resin finishes on rayon and cotton fabrics. The product is said to exhibit little or no tendency to yellow or discolor rayon or cotton fabrics when exposed to high temperature curing cycles. The company also points out that it enhances the hydrophobicity of resin-

treated fabrics, which is very useful in developing wash and wear fabrics.

Monopolene N also serves as an effective softener and plasticizer for thermosetting resin finishes on rayon and cotton fabrics, the manufacturer points out, which results in improved physical properties such as tear strength, retention of tensile strength and improved flat abrasion resistance.

Samples and technical data sheets on these new products can be obtained by using this journal's reader service request card.

(Request Item No. G-4)

Aluminum Salt

A new aluminum salt, Trinoral, for use in the preparation of water repellent compounds for textiles, has been introduced by Rhodia Inc. The new product, aluminum triformate, can advantageously replace such chemicals as aluminum diformate, aluminum acetate, etc. in the preparation of water repellent compounds, the company points out. The purity of Trinoral makes it very stable in compounding and, since it does not require the addition of acetic acid, it is economical and efficient, it is said.

(Request Item No. G-5)

Unit Converts Steel Drums Into Vacuum Cleaner Tanks

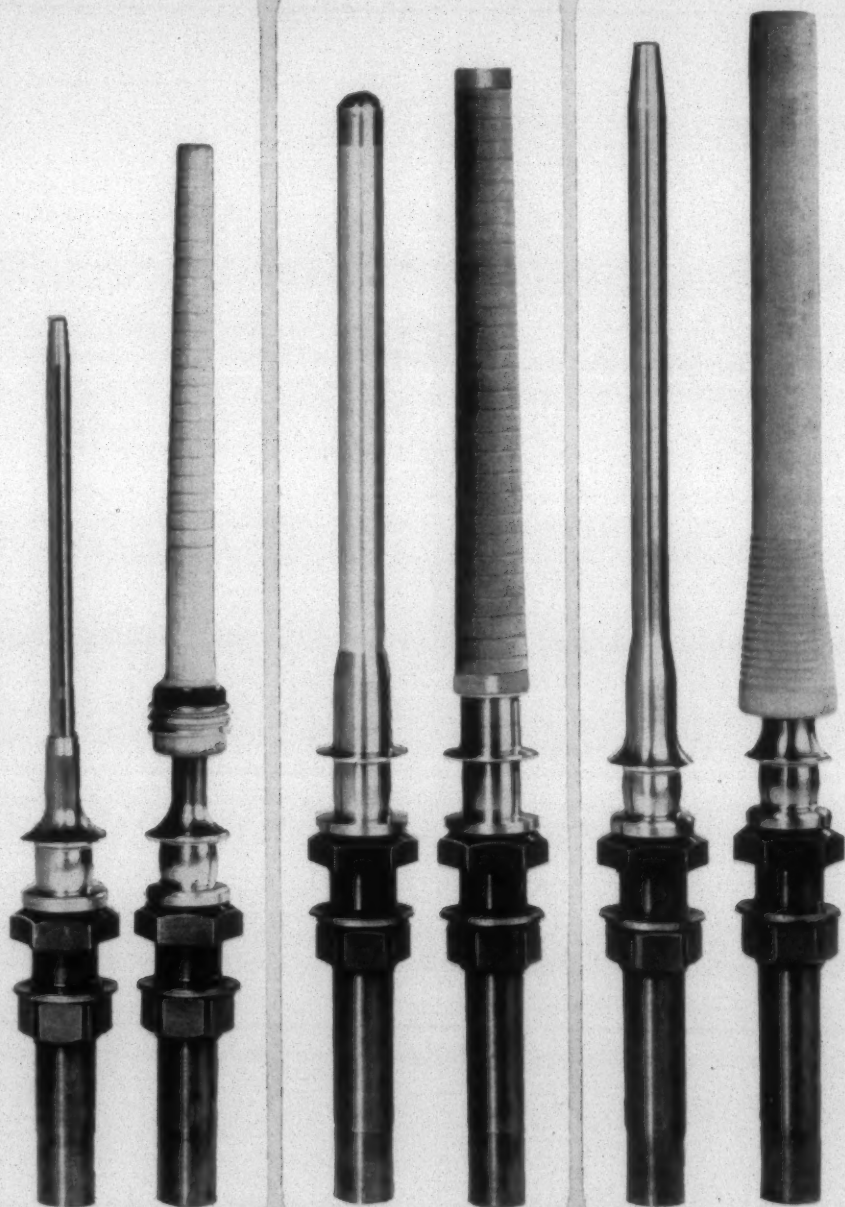
A new conversion unit which transforms any standard 55-gal. drum into a vacuum cleaner tank is being introduced by Clarke Sanding Machine Co. The assembly, named the Clarke Giant Conversion Unit, reportedly offers the cleaning capacity of a large wet-dry vacuum cleaner at exceptionally low cost. It consists of an air intake and exhaust unit powered by a 1 h.p. motor, inside filter bag and conversion adapter cover which fits any standard 55-gal. drum. Clarke points out that attaching the unit requires no alterations of the drum. The unit is simply placed on the open top of the drum and held securely by the vacuum. The motor is a 1 h.p. Universal type, by-pass, moisture-proof, 115 volt, a.c.-d.c., rubber-mounted unit. Users of the Model WD-23 Clarke vacuum cleaner reportedly can easily convert it to a large capacity drum tank unit by simply attaching the motor head assembly to the drum top with the new conversion adapter cover. (Request Item No. G-6)

Arogum Potato Starches

A new family of treated potato starches which reportedly offer greater viscosity stability has been introduced by Morningstar, Nicol Inc. Known as the Arogums, these new products are made by newly-developed oxidation processes. Similar "chlorinated" starches from cereal bases

ROBERTS *ball bearing* SPINDLES

FOR SPINNING AND TWISTING



Available in three Top Drive types: for filling quills, paper tubes, and wood warp bobbins.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

Based on many years of experience with anti-friction spindles, the best ideas of skilled people in the Mills were embodied into Roberts Ball Bearing Spindles to provide the most wanted features.

First was the elimination of oiling. Roberts Spindles need no attention except for two drops of oil every 3 to 5 years.

The capacity for high spindle speeds is most important — not only for today but for the ever increasing speed demands in the future. The use of precision ball bearings provides this reserve speed capacity.

More dependability, better accessibility and much easier plumbing is obtained by means of the all-steel base design, exclusive with Roberts.

Small whorl diameters mean reduced cylinder speeds and lower horsepower consumption, increased life of cylinders, bearings, tape tension pulleys and tape.

Using Roberts Spindles for current bobbin lengths and ring sizes still allows in most cases for the future increase of package sizes without changing spindles, at no extra cost.

Time is saved in installation by the hex base, the cupped base seat and washer, the extra fine tightening threads. Steel base and whorl prevent damage from tapping during plumbing.

The high smooth finish on all parts and elimination of the external doffer guard prevent lint catching.

All these outstanding features—plus many more—offer the greatest flexibility of use, the highest precision for long life, the assurance that Roberts Ball Bearing Spindles will serve the Mills' needs well into the future—and, at low initial cost.

FOR THE TEXTILE INDUSTRY'S USE—

have existed for some years, but the new Arogums are said to be superior with respect to: (1) larger granule size; (2) lessened set-back (reversion to the original gelation after the cook); and (3) narrower limits of viscosity variation. In relation to starches converted by enzyme action or acid treatment to reduce viscosity and ropiness, the Arogums have the valuable property of markedly less loss through conversion to sugar, the company points out.

The Arogums can be supplied to speci-

cation as regards maximum viscosity and the constancy or rise or fall of that viscosity with continued cooking and subsequent cooling. Five grades are already standard to meet present-day requirements in those mills which desire higher solids contents in batches of workable fluidity. Because of the chemical nature of this new starch modification, lower temperatures and less time are required to develop the viscosities and consistencies needed for most work. Cooks as low as 150°F. and 10 minutes are possible, it is said. The product is shipped dry in 100-lb. multiwall paper bags.

(Request Item No. G-7)

400-Denier Fortisan 36

The Celanese Corp. of America is now offering a new 400-denier Fortisan-36 rayon yarn designed for use in applications where properties of great strength, low stretch and dimensional stability are required. The new yarn, available in .8 Z twist on 4-lb. cones and zero twist on 4-lb. tubes, is expected to alleviate somewhat the current shortage of regular Fortisan which is sold in deniers of 30 to 300. Anticipated end uses include: home furnishings, apparel and industrial applications such as vinyl-laminated fabrics, electrical core thread, mechanical uses, cotton duck reinforcement and sewing thread. The new yarn is being priced initially at \$1.75 a pound. (Request Item No. G-8)

NON-FLUID OIL

TRADE MARK REGISTERED

The Choice of Cost-Conscious Carders

Always—the best product in any given market turns out to be the most economical . . . this has been proven time and again by thousands of users of NON-FLUID OIL.

Consider these facts:

1. Drip-less, waste-less, NON-FLUID OIL is less expensive to use because it stays in bearings and off clothing—giving better lubrication.
2. NON-FLUID OIL prevents wear and maintains accurate card adjustment—lasting 4 to 6 times longer in comb-boxes.
3. NON-FLUID OIL stays in comb-boxes—prevents heating and lubricates dependably, whereas ordinary oil leaks out and wastes—getting on to card clothing and cotton.
4. With ordinary oil, cards wear and lose adjustment quickly, causing uneven sliver from cards which gives you trouble all through the mill.

NON-FLUID OIL is used in card rooms of 7 out of 10 of the best run mills. Write for Bulletin T-5 and free testing sample.

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Tensiometer

Custom Scientific Instruments Inc. announces the SMT Tensiometer designed to measure thread tensions on sewing machines. The thread is drawn through the 3 pulleys of the tensiometer by means of an electrical motor. The take-off point of the thread from the sewing machine is after the thread guide above the needle. Tension measurements are desired when breakage occurs in sewing. The unit reportedly affords simple and easy means of measuring the tension. Other possible uses for the tensiometer are the effect of finishes, twist, softeners, lubricants on thread and of natural and synthetic threads on a sewing machine under constant conditions through tension measurements. The unit is available in different ranges up to 2,000 grams.

(Request Item No. G-9)

Colored Aluminum Coatings

Duncan-Stewart Industries Ltd. is now offering aluminum coatings in color. Marketed under the trade-mark Multi-Purpose, the coatings come in 16-oz. spray cans or in 1 and 5-gal. cans for use with brush, roller or power spray. The new product, available in gold, silver, cobalt blue and green, reportedly provides a decorative waterproof protective coating for virtually any type surface, including concrete, masonry, brick, metal or wood. The company points out that Multi-Purpose can be used on interior and exterior surfaces.

Used for industrial buildings and weathered surfaces, it has exceptional lasting qualities backed by a 12-year unconditional material replacement guarantee. Duncan-Stewart points out. The opaque characteristic of Multi-Purpose provides great "hiding power" which makes it possible to cover badly soiled and discolored surfaces with a single application. The aluminum coating uses a synthetic resin base and a pigment supplied by the Aluminum Co. of America. It will not oxidize, corrode or be discolored by fumes such as those containing sulphur. While Multi-Purpose withstands temperatures to 250°F., it is also available in a special heat-resistant type capable of standing temperatures as high as 1,000°F.

(Request Item No. G-10)

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USE the attached cards for a prompt reply to your requests — no postage required.

For the Mill Bookshelf

Unisorb Machinery Mounting

A new die-cut folder containing an actual sample of Unisorb, the low-cost machinery mounting, has been prepared by The Felters Co. It gives information and specifications on the various grades recommended for use under different types of machines. Unisorb is a specially engineered non-rigid machinery mounting with permanent holding power. The outstanding feature is said to be its big contribution to vibration control in plants, with an ability to absorb up to 85% of transmitted vibration. In addition, Unisorb contributes greatly to machinery mobility. Machines mounted on Unisorb can be moved easily and quickly, without hole patching and drilling, to take advantage of lower-cost straight-line production on different jobs. The new sample folder highlights some 8 special advantages in all, and gives loading ranges, ordering and specifying data for 5 different types. The Unisorb sample may be easily detached for examination and test.

(Request Item No. G-11)

Trolley Conveyor Upkeep

How to get the maximum performance and longest service life from overhead trolley conveyors is the subject of a new bulletin by Rapistan-Keystone Inc., manufacturer of overhead conveying equipment. The bulletin is a compilation of practical tips written in simple, easy-to-follow terms. Detailed sketches of the various parts of trolley conveyor illustrate the points at which checks should be made periodically by the maintenance man.

The literature states that rivetless "chain and trolley" conveyors give long and exceptionally good service, even when operated under adverse conditions, if a good maintenance program is followed, a simple procedure too often overlooked in the busy plant. Detailed step-by-step are the regular checks that should be made to give such equipment longer life, prevent down-time, and assure highest salvage time. Suggested schedules of maintenance are outlined for (1) grease and oil-type trolleys; (2) chain; (3) track; (4) roller turns; (5) traction wheels and (6) drives. Pointers also are given on maximum protection of electrical and safety equipment.

(Request Item No. G-12)

Factoring Tips For Producers Of Upholstery Fabrics

What factoring can do for the manufacturer of upholstery fabrics is brought out in a new booklet *Upgrade Your Profits* recently issued by William Iselin & Co. Inc. The booklet is the latest in the guide-to-factoring series issued by the company, and is directed specifically to manufacturers of upholstery fabrics. Of all the industries

supplying a style market, the booklet points out, few impose a more intricate responsibility on their chief executives than the manufacture of upholstery fabrics. Citing a few of the headaches that face this segment of the industry, the literature states that "these are all problems for which practical answers can be found in modern-day factoring."

(Request Item No. G-13)

Water Conditioning

The value of proper water conditioning in the textile industry is highlighted in *Calgon Data for the Textile Chemist*, a 16-page booklet now being made available by Calgon Inc. Calgon, principal product of Calgon Inc., a subsidiary of Hagan Corp., is considered an essential chemical in the preparation, dyeing and finishing processes for all kinds and forms of textile materials. The booklet describes how the company's water conditioner eliminates soap and scum difficulties, assists in scouring, dyeing and finishing processes and insures superior cleanliness as well as freedom from rancid odors. Also reviewed is Calgon's safe and effective action which reduces seconds and re-dyes, thus increasing production.

In its booklet, the company reports that precipitation of soaps, oils, finishes, sizes and dyes with metallic salts is prevented through the use of Calgon. It is particularly effective in preventing water hardness from reacting with dyes and inhibits the pick-up of iron in the water system thus preventing the dulling of shades produced. Calgon is a molecularly dehydrated phosphate glass that softens water and serves as a solvent for insoluble lime soaps.

(Request Item No. G-14)

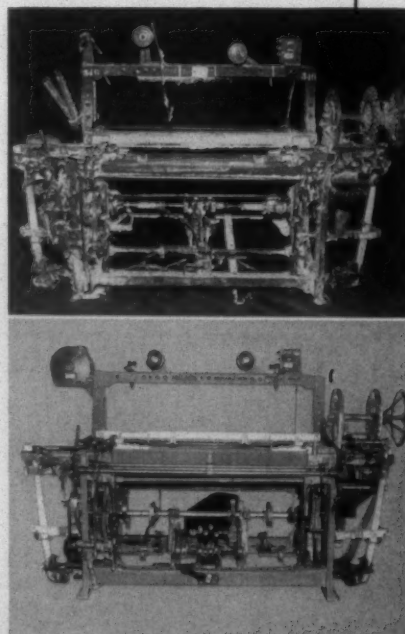
Science in Industry

Six scientific principles and 6 inventions that reshaped civilization are described in *Science in Industry*, a new booklet issued by the Du Pont Co. The principles are Einstein's theory of relatively, Lavoisier's analysis of the composition of air, Newton's law of universal gravitation, Darwin's theory of evolution, Pasteur's theory of bacteria and Copernicus' concept for the solar systems. The 6 inventions include the airplane, the telephone, the steam engine, movable type, the automobile and the clock with interchangeable parts. Also shown in the booklet are 6 of the great monuments

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FOR THE MILL BOOKSHELF

to science and invention: the Roman aqueduct at Nimes, the Hoover Dam, the Empire State Building, the Panama Canal, the Savannah River atomic energy plant and a Detroit automobile assembly line.

The 32-page illustrated booklet traces the rise of science from pre-historic ages, and shows how today the industrial organization is the chief means for co-ordinating scientific knowledge, invention and technology to serve the needs of man. Corporations like Du Pont have assumed the responsibility for promoting and co-ordinating invention and development, and, to some extent, for fundamental research, the booklet points out. (Request Item No. G-15)

How to Stack and Load Corrugated Boxes

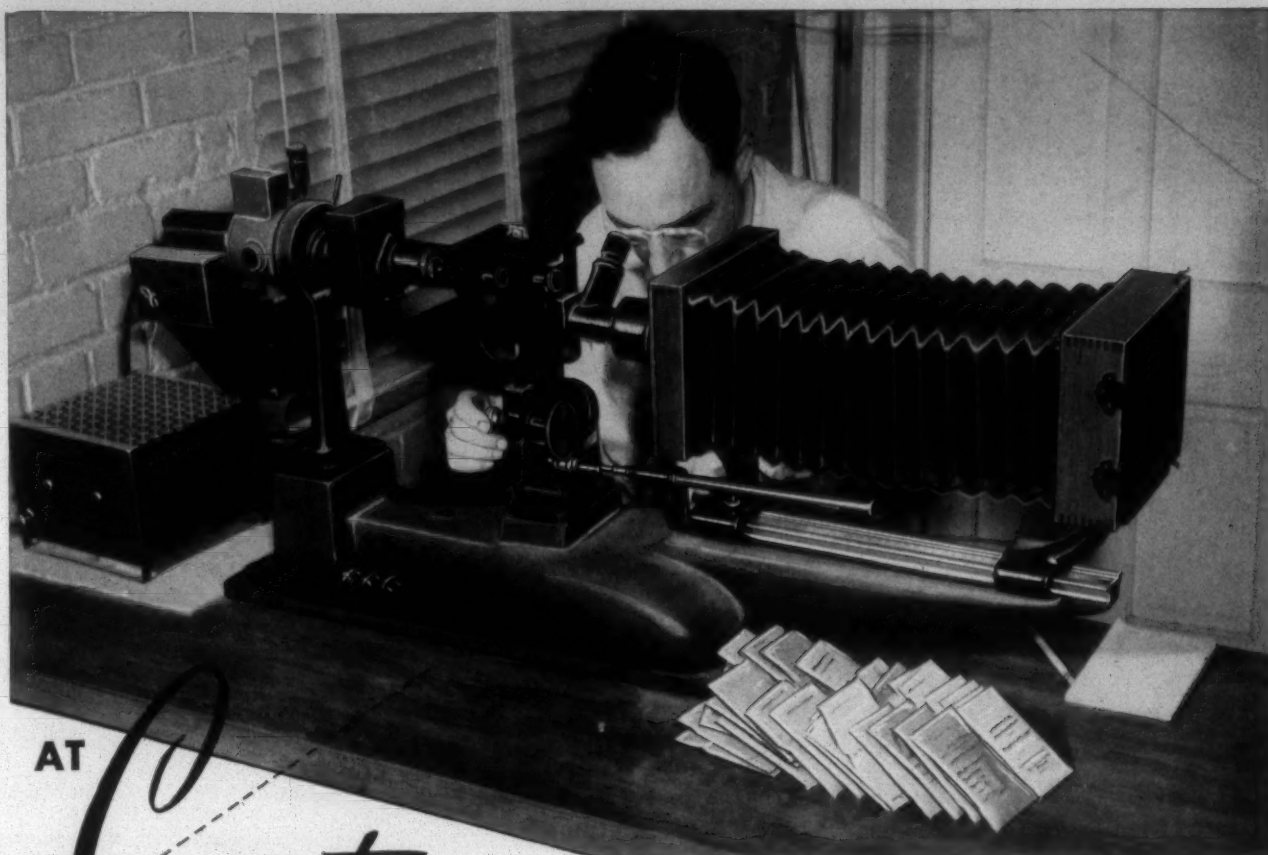
Nine basic rules for efficient stacking and loading are thoroughly discussed in a new edition of *How To Stack and Load Corrugated Shipping Boxes*, a booklet published by Hinde & Dauch. New copy and detailed illustrations describe effective methods of estimating storage space, distributing load weights, handling, identification, and the use of gates, bulkheads, barricades and weatherstripping. A copy of the new 16-page booklet, number two in the H&D Little Packaging Library series, is available on request. (Request Item No. G-16)

Gulfspin Spindle Oil

The Gulf Oil Corp. is offering a new pamphlet describing its Gulfspin spindle oil. Gulfspin is said to offer these important advantages: (1) prevents sludge from depositing in spindle bases and keeps spindle blades clean indefinitely; (2) no increase in viscosity even after extended service; (3) excellent load-carrying ability. The pamphlet points out that the highly effective rust-preventive characteristics of Gulfspin help to reduce or eliminate corrosion difficulties which often result from humid conditions. The product is available in 3 grades—35, 38 and 41—to cover lubrication needs of various type spindles. A copy of the pamphlet (SP-8759) can be obtained by using this magazine's reader service request card. (Request Item No. G-17)

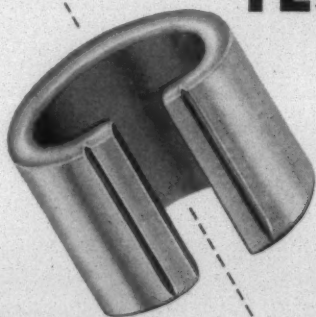
Curtis & Marble Anniversary Booklet

Curtis & Marble Machine Co., currently marking its 125th year in the textile industry, has published a 33-page booklet tracing in words and pictures the history of the company. The firm was founded in 1831 at Worcester, Mass., by John Simmons, Abel Kimball and Albert Curtis for the manufacture of machines to nap, shear and brush woollens. In 1895 Albert Curtis sold his interest in the company to Edwin T. Marble, making the latter sole proprietor. On December 31 of that year the company was incorporated under the name of Curtis & Marble Machine Co., with Edwin T. Marble as president and his four sons—



AT

CarterPRECISION COMES FROM **TESTING TESTING TESTING**



Carter Travelers insure better spinning, finer quality, because of constant testing and checking. Carter Travelers are meticulously tested for absolute uniformity of weight, temper and shape. The constant high quality is carefully controlled through every step of manufacturing, from the raw materials received, to each finished individual Traveler, by the facilities and personnel of our large, modern metallurgical laboratories.

Quality goes up because Carter Travelers meet specific quality standards for individual yarns.

Production goes up because Carter Travelers have the essential shape, surface and temper to perform with dependable efficiency at maximum spindle speeds.

Costs come down, because Carter Travelers are precision matched to expensive rings, with a money-saving reduction of wear and down time to an absolute minimum.

CARTER TRAVELER COMPANY

Division of A. B. CARTER, INC., GASTONIA, N. C.

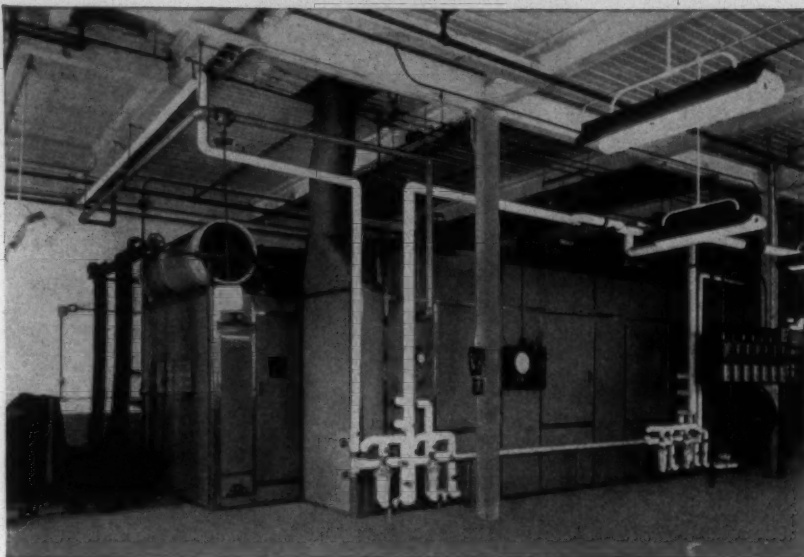
Manufacturers of The Boyce Weavers Knotter

REPRESENTATIVES

R. A. Haynes, Special Representative	114 W. Fifth Ave., Gastonia, N. C.
W. L. Rankin	501 S. Chester St., Gastonia, N. C.
D. E. Phillips	2702 Garden Lakes Blvd., Rome, Georgia
P. L. Piercy	128 Hudson St., Spartanburg, S. C.
J. R. Richie	3014 Lewis Farm Road, Raleigh, N. C.
J. K. Davis	P. O. Box No. 129, Auburn, Ala.
C. E. Herrick	44 Franklin St., Providence, R. I.
Hugh Williams & Co.	47 Colborne St., Toronto 1, Canada

CURE TEXTILE FABRICS

AT A PROFIT!



*Installation view of
Proctor Loop Curer*

- ★ Greatest Curing Uniformity
- ★ Improved Design
- ★ Maximum Capacity with Minimum Power Requirements
- ★ Flexibility of Operation
- ★ Simplified Installation



THE PROCTOR LOOP CURER and ROLLER CURER

These rugged, high-capacity machines feature the latest design and construction improvements—all geared to increase your profits. Units can be combined with existing equipment to meet your exact requirements. For fabrics that will not handle properly in loop, the roller curer is recommended. Recent developments for this machine also include improved air distribution, flexibility in holding capacity, and no-stretch operation. These machines are the result of long experience in supplying machinery to the textile industry. For the complete story of the profit-making opportunities offered by Proctor, write today for latest information bulletins.

WRITE FOR DETAILS. PROCTOR & SCHWARTZ EQUIPMENT FOR THE TEXTILE FIELD

AUTOMATIC BLENDING SYSTEMS • WEIGHING FEEDS • PICKERS • SHREDDERS • BALE BREAKERS • SYNTHETIC CARDS • GARNETTS • DRYERS FOR FIBROUS MATERIAL • YARN DRYERS • HOT AIR SLASHER DRYERS • CLOTH CARBONIZERS • ROLLER DRYERS AND CURERS • LOOP AGERS FOR PRINT GOODS • TENTER HOUSINGS • OPEN-WIDTH BLEACH SYSTEMS FOR WOVEN FABRICS • MULTIPASS AIRLAY DRYERS • NYLON SETTING EQUIPMENT • CON-O-MATIC WASHERS • CONTINUOUS BLEACH SYSTEMS FOR PRODUCING TUBULAR KNITS • EQUIPMENT FOR "REDMANIZED"® SHRUNK-TO-FIT FABRICS • CARPET DRYERS



PROCTOR & SCHWARTZ, INC.

Philadelphia 20, Pa.

Manufacturers of Textile Machinery & Industrial Drying Equipment

FOR THE MILL BOOKSHELF

Edwin H., William C., Charles F. and Albert C.—as officers.

In 1910, Edwin H. Marble succeeded his father as president, and served in the post until 1941 when he was succeeded, in turn, by Albert C. Marble. Albert C. was elected chairman of the board of directors in 1955 and Walter E. Hildick was named president and treasurer.

Dedicating the booklet to the memories of many generations of Curtis & Marble people, Mr. Hildick states: "Over the past 125 years, the course of American business has been marked by heartening surges and discouraging recessions. That a relatively small company such as ours has survived such trials is no mean accomplishment. That we have overcome them, kept abreast of the advances and coped with the declines, is, I believe, a business triumph. Such seasoning and experience offer convincing evidence of our ability to serve now and in the future, even more adequately than in the past." (Request Item No. G-18)

Chemlon Products Brochure

A 12-page brochure on Chemlon, John Crane products fabricated from Du Pont Teflon, gives valuable information on the material as well as many applications for which it can be fabricated. Included in the text are data on properties, complete specification table and descriptions of fabricated products, together with operational and service data. A wide variety of Chemlon products are described, such as mechanical and hydraulic packings in both braided and molded types; special hydraulic packings; FreeFlow envelope-type and solid gaskets; O rings; flexible bellows; sheet, rod, tubing and tape; molded and machined parts for mechanical equipment; and electrical/electronic parts and insulation.

(Request Item No. G-19)

Shafting Material

A new 4-page bulletin (plus a standard size list page) describes the new 60 Case hardened and ground material for shafting, rolls, guide rods etc. being produced by Thomson Industries Inc. Produced at high rates by special techniques and equipment, 60 Case reportedly avoids the problems of erratic warpage and straightening, and resultant grinding problems. Finished 60 Case parts frequently cost less than the scrap losses in ordinary production methods, it is said. The bulletin describes the advantage of 60 Case, suggests its uses and lists diameters and lengths in current production.

(Request Item No. G-20)

Elwell-Parker Anniversary

A new 4-page brochure commemorating its 50th year of industrial truck production has been released by The Elwell-Parker Electric Co. The literature illustrates the world's first industrial truck ever built which was introduced by the company in 1906. In marked contrast, it also pictures and describes 6 new lines of Elwell-Parker

Need

NEW

Pickers?

THE DEAD-WEIGHT, CONSTANT-PRESSURE CALENDER RACK RELEASE

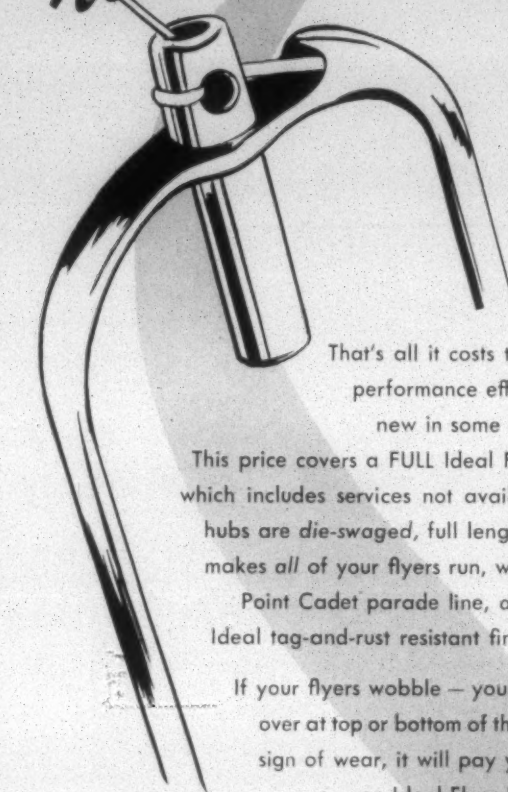
This replaces the old friction let-off, and applies dead weight to the calender racks in the same manner as if a weight were hung on a drum-pulley on the calender rack cross-shaft. The disc, which replaces the old friction drum, is firmly gripped by clutch-pads on each side of the disc. The slightest movement of these clutch pads automatically opens them to let the let-off disc move. The disc is therefore constantly holding a dead weight in suspension, and the pressure on the lap is quite uniform.



This makes firmer, heavier laps
without calender rack breakage.

**Aldrich Machine
Works**
Greenwood, South Carolina

New Flyer Performance



Only
\$1.25

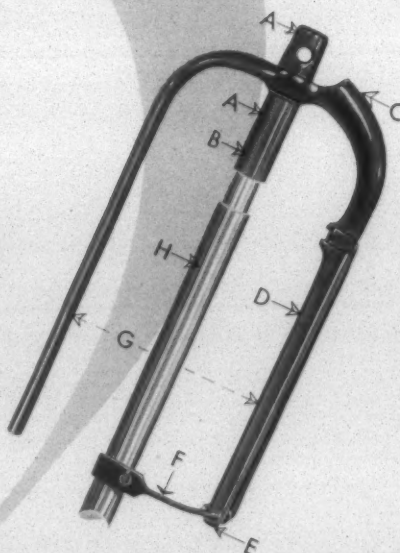
That's all it costs to restore your flyers to new performance efficiency — actually better than new in some respects.

This price covers a FULL Ideal Flyer Reconditioning** job, which includes services not available anywhere else. Barrel hubs are die-swaged, full length. Selecto-Speed* Balancing makes all of your flyers run, with the precision of a West Point Cadet parade line, at your operating speeds. The Ideal tag-and-rust resistant finish is superior to any other.

If your flyers wobble — your roving jerks — ends run over at top or bottom of the bobbin — or show any other sign of wear, it will pay you to get full information on Ideal Flyer Reconditioning Service.

**Ideal offers partial services — comparable to those available elsewhere — starting at 48c.

- A Realigned
- B Die-swaged full length
- C Slots regauged
- D Hollow leg repaired
- E Ends rebuilt and refinished
- F Pressers blocked
- G Flyers blocked
- H Rebuilt or replaced



*Patented

Ideal Machine Shops, Inc., Bessemer City, N. C.

Continuous Service to Textile Mills Since 1925

FOR THE MILL BOOKSHELF

trucks, including its new low headroom fork truck series, a new line of high-lift platform trucks, its new die handling truck series, a new die handling truck for inclined presses, a new line of stand-up, center control fork trucks, and a new gas-powered low-lift platform truck series. The brochure highlights basic truck attachments plus major component parts. All are illustrated and described. (Request Item No. G-21)

Safe Handling Of Chlorine And Caustic Soda

Two illustrated wall charts presenting up-to-date instructions for the safe handling of chlorine and caustic soda have been prepared by Olin Mathieson Chemical Corp. The charts are printed in large type on weatherproof, plastic-impregnated paper and are suitable for hanging in either outdoor or indoor areas where chlorine or caustic are unloaded or used. The chlorine chart describes proper procedures for unloading tank cars and ton containers, what to do in case of a leak, and first aid measures to be followed in the event of exposure to chlorine. The caustic soda chart presents the steps for unloading tank cars of 50% and 73% caustic and a list of safety "Do's" and "Don't's" to be observed in handling the liquid material. It also includes instructions for preparation of tank cars for the return trip to the manufacturer. (Request Item No. G-22)

Chlorine Vaporizer System

The Whitlock Mfg. Co. is offering a 2-page, illustrated bulletin (No. 132B) on its standard chlorine vaporizer system for converting liquid chlorine to dry vapor. According to the literature, the vaporizer system offers these features: (1) high capacity—optimum distribution of heat transfer surface for high vapor rates; (2) simple design and heavy construction; (3) small chlorine content—assures safe operation, promotes high superheat, prevents condensation and corrosion in vaporizer and lines; (4) simple control—reduces maintenance and down-time for accessory servicing; (5) rapid volatilizing—puts vaporizer "on the line" without delay; and (6) easy disassembly—removal of one set of bolts permits convenient steam cleaning and washing of interior parts. (Request Item No. G-23)

Darlan Dinitrile Fiber

B. F. Goodrich Chemical Co. is offering additional information on Darlan, the company's new dinitrile fiber, in a 4-page service bulletin. According to the literature, Darlan possesses a combination of useful properties. It is basically a very soft fiber, but at the same time it is one of the most resilient of all fibers. With a tenacity between 1.5 and 1.75 g.p.d., it fits into the medium strength range. It has an elongation of 30% or greater and a softening temperature of about 350°F., the bulletin points out. It retains a significant portion of its strength

"HOLYOKE"

CALENDER ROLLS



Established
1863

HOLYOKE MACHINE COMPANY

CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT

HOLYOKE, MASSACHUSETTS

FOR THE MILL BOOKSHELF

and is dimensionally stable at 320°F. It is a low moisture regain fiber and therefore requires a certain amount of static control. Four tables are presented in the service bulletin. They cover: (1) physical properties of Darlan; (2) elastic behavior of the fiber; (3) effect of environment on Darlan fiber and fabric properties; and (4) chemical resistance of Darlan fiber.

(Request Item No. G-24)

Alvey Vertical Conveyor

A bulletin by Alvey Conveyor Mfg. Co. describes the application of the fully automatic vertical reciprocator conveyor in plants and warehouses when it is necessary to utilize several floor levels in the handling of palletized cases. The Alvey reciprocator is self-loading and self-discharging. It automatically transfers palletized cases up or down, to any predesignated floor level. Complete controls and safety devices are incorporated in a fully-integrated installation, the literature points out.

(Request Item No. G-25)

Paisley Anniversary Booklet

Paisley Products Inc., a division of Morningstar, Nicol Inc., has published a 20-page booklet marking its 25th anniversary as a division of Morningstar. The purpose of the booklet is two-fold. First, it shows how wide is the range of starches and flours, dextrans, water soluble gums and polyvinyl acetate emulsions now available to the formulating chemist. Second, it gives a good perspective of the rapidly developing field of liquid adhesives for both packaging and manufacturing.

(Request Item No. G-26)

Collecto-Vac Catalog

The Bahnson Co. is offering a 4-page, illustrated catalog describing its Collecto-Vac system for collecting lint, fly and broken ends. The catalog points out that the Collecto-Vac is offered in 2 distinctive models—one with belt driven motor mounted externally; the other with a direct driven motor, internally housed and compactly de-

signed for efficient performance. Details of construction are described and illustrated, and a cross section diagram shows the arrangement of Collecto-Vac flutes, flute connecting tubes and main duct on a spinning frame installation.

(Request Item No. G-27)

Galvanized Drop Wires

Steel Heddle Mfg. Co. is offering a card with samples featuring the Stehedco galvanized drop wire. Mounted on the card is a drop wire with standard copper finish, and a sample galvanized drop wire. The card is designed to serve as a comparative test between the two. The card can be placed either outdoors or near a weave room humidifier, Stehedco points out, and within a week or two the amazing superiority of the galvanized wire will be obvious. A test card can be obtained by using this magazine's reader service request card.

(Request Item No. G-28)

Clutch Catalog

Precision Specialties is offering a new brochure covering the engineering and pricing information on its line of stock clutches. Included with the brochure is the firm's current price list on both miniature and sub-miniature stock clutches.

(Request Item No. G-29)

Livesey Automatic Loom

The Trumeter Co., U. S. agent for Henry Livesey Ltd., Greenbank Iron Works, Blackburn, England, is offering a 2-page leaflet describing the Livesey new shuttle changing non-stop automatic loom. The leaflet gives detailed information on the construction and operational features of the unit, said to be in widespread use in a number of countries.

(Request Item No. G-30)

Techniques of Plant Maintenance & Engineering

(Published by Clapp & Poliak Inc., 341 Madison Ave., New York 17, N. Y.; \$10 postpaid.)

This book reports proceedings of the con-

ference held with the 1956 Plant Maintenance and Engineering Show and contains the texts of 16 papers, summaries of 15 roundtable discussions and answers to approximately 1,100 specific questions. Five industries, including the textile industry, get special attention in the book. Subjects include preventive maintenance, equipment replacement policies, cost control, electrical equipment, forms and reports, etc. The book, seventh in the series, is the broadest in scope. The 248 pages include 110 illustrations, charts and tables.

Basic Chemistry of Textile Preparation

(By S. R. Cockett, M.Sc. Tech., F.R.I.C., and K. A. Hilton, B.Sc. Tech.; Philosophical Library, 15 E. 40th St., New York 16, N. Y.; Price \$6.00)

This work is designed to provide a complete theoretical course in basic textile chemistry. It covers (1) fiber structure; (2) chemistry of the natural fibers; (3) a discussion of plastics; (4) man-made fibers; (5) fiber properties; (6) scientific principles of wetting and detergency, and methods suitable for cleansing both natural and synthetic fibers; (7) bleaching; (8) an analogy between the textile industry and other related trades dealing with fibrous materials; and (9) tests and defects. The authors have had wide experience both in industry and in lecturing.

Basic Chemistry of Textile Colouring and Finishing

(By S. R. Cockett and K. A. Hilton; a companion publication of *Basic Chemistry of Textile Preparation*; Price: \$6.00)

This work begins with an account of the various types of dyes with the conditions under which each is applied, together with the related subject of stripping. There follows a brief account of machines used, and of instrumentation and control methods; the theory of dyeing; transfer of dye to fabric; thermodynamic and kinetic aspects of dyeing; etc. The work concludes with data on the coloring of miscellaneous substances, and includes tables on the identification of dyes and accounts of methods of evaluation together with details of stains and dyeing faults.

Serving The Textile Industry

Eastman Chemical Forms New Development Section

To accelerate new product development, Eastman Chemical Products Inc., subsidiary of Eastman Kodak Co., has created a new chemical sales development section separate from its commercial sales department. William M. Gearhart, formerly chief chemist in charge of the service and development

laboratories of the company at Kingsport, Tenn., has been appointed manager of the new section. R. B. Herring, who had served as assistant to Mr. Gearhart, has been promoted to fill the position as chief chemist in charge of the laboratories, which will continue under Mr. Gearhart's supervision.

In creating the new sales development section, the company plans to continue emphasizing the service nature of the labora-

tories in dealing with customer problems connected with the sale of products already on the market, as heretofore. This practice has been traditional with Eastman because a substantial part of its sales involves developing special techniques and procedures for handling the processing of its products by customers in their respective operations.

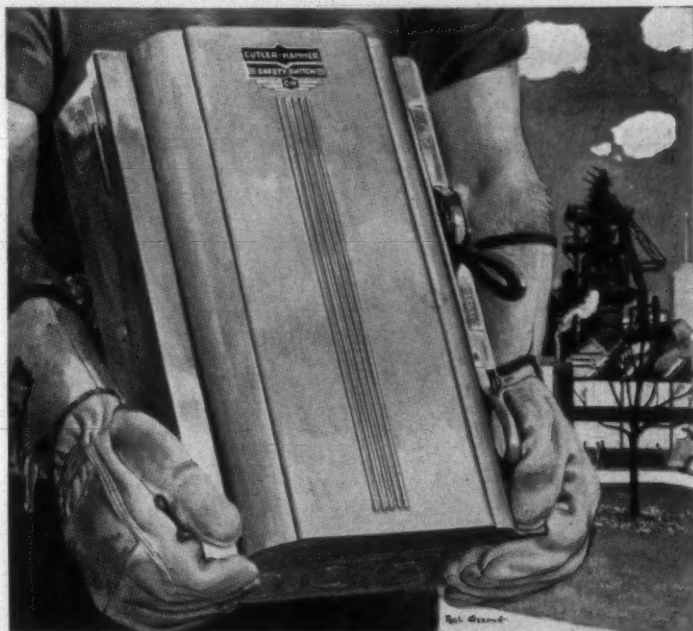
Under the new arrangement, all work with products being considered for the first

WHAT'S NEW IN MOTOR CONTROL? ★ ★ ★ GET IT FIRST IN CUTLER-HAMMER

Now...A Safety Switch Built to the Standards of Cutler-Hammer Three-Star Motor Control ☆ installs easier

☆ works better

☆ lasts longer



**New Bulletin 4105 Safety Switch Type A.
30 to 1200 Amp. Sizes**

Engineered for "heat-proof" dependability. New design for minimum internal heat generation; new materials for heat immunity.

Automatic pressure fuse receivers; no screws to forget to tighten . . . no screws to loosen in service by alternate expansion and contraction.

Visible blades for quick and sure inspection at all times. New double insulated steel operating hook. Safety is important in safety switches.

Panel mounted mechanism of this new Bul. 4105 Safety Switch is readily interchangeable with that of the old Bul. 4101 to permit replacements without case and conduit work.

The new Cutler-Hammer Three-Star Motor Control has proved a sensation wherever it has been tested in comparison with any other control equipment. The tougher the tests, the more dramatic has been its demonstrated superiority. A kaolin processing plant in Georgia, for example, reports: "Because of the hard service we give motor control in our plant, we have always had to replace contacts every 30 to 60 days. Our first Three-Star Control unit has now been in daily use for *thirteen months* and its original contacts still look and work like new." A lumber mill in California says: "Control contacts have always been a problem on our drive of the feed chain going to the trim saw. We had to replace contacts every few weeks. Our first Three-Star Control on this job, purchased from the stock of our local Cutler-Hammer distributor, is now in its *twenty-fourth month* of continuous daily operation with its original contacts still in service."

Such control equipment brings important operating dependability and savings to any job where an electric motor is used. But it also means that such better motor control should be matched with a safety switch which can equal the performance of the motor control. And now this is possible. Cutler-Hammer Authorized Distributors are now stocked and ready to serve you with the new Bul. 4105 Safety Switch, the safety switch built to the standards of Cutler-Hammer Three-Star Motor Control. It is loaded with new features. See it. Try it. Prove it. Order one today.

CUTLER-HAMMER, Inc., 1455 St. Paul Ave., Milwaukee 1, Wisconsin.



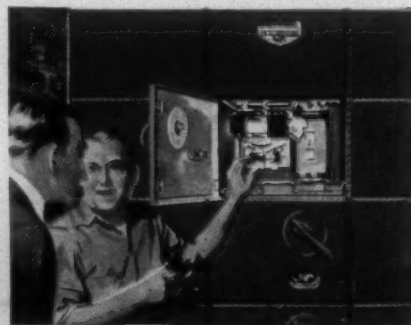
Cutler-Hammer Three-Star Motor Control can now be obtained in every needed form



Cutler-Hammer Authorized Distributors carry stocks of Three-Star Motor Control in sizes and types of enclosures to meet all the usual industrial needs.



Leading machinery builders equip their machines with Cutler-Hammer Three-Star Motor Control as standard original equipment, often as components on panels.



The new Cutler-Hammer Three-Star Unitrol provides for the quickest installation or rearrangement of the finest in control equipment, C-H Three-Star Motor Control.

SERVING THE TEXTILE INDUSTRY—

time, and those in the development stage, will be assigned to the new chemical sales development group. Mr. Gearhart and his staff will have the responsibility for coordinating all laboratory work and industry contacts in bringing new developments to commercial status. At this point, responsibility for handling such products and establishing normal customer contact will be transferred to the commercial sales department and its field representatives.

As a result of this separation of functions, Eastman anticipates that customers will be benefited in two ways. First, more emphasis and concentration can be directed towards developing products that meet specific end-

use requirements resulting from outside suggestions and requests, as well as following them through to successful realization. Second, the commercial sales staff will be able to devote more effort towards servicing the needs of customers for the established line of products.

Landis Now Stocking Card Clothing In Charlotte

Oliver D. Landis Inc. of Charlotte, N. C., which last Fall was named exclusive agent in Virginia, the Carolinas and Tennessee for the card clothing manufactured by A. B. Kardbeslag of Norrkoping, Sweden, is now carrying a stock of cylinder and doffer sets at Charlotte. Previously orders for the Swedish card clothing were routed

to Norrkoping by the Landis office, with individual orders being filled by the Swedish firm and sent direct to mills. Now, with the Landis firm carrying an inventory at Charlotte, customs clearance is simplified and orders can be received in Charlotte one day and trucked directly to any mill the next.

Hart Products Corp. Opens Research Lab

The Hart Products Corp., manufacturer of textile chemicals, has announced the opening of its new research and development laboratories in Jersey City, N. J. The new laboratory, which replaces one destroyed by fire in January 1955, provides 4,000 sq. ft. of floor space with modern benches and facilities to accommodate the chemists. In addition, a separate laboratory room has been provided for large-scale process development work, equipped with 5-gal. glass and lead-lined reactors.

A special feature of the new laboratory is complete equipment for the development and testing of resin finishes. Included in the new equipment are: 3-roll laboratory padder, launderometer, tensile and tear strength testers, crease-resistance testers and curing ovens. In addition to the specialized equipment, the laboratory has been equipped with the latest apparatus and instruments for the analysis and control of manufactured products.

Du Pont Modifies Its Fiber Sales Program

Du Pont's textile fibers salesmen formerly specializing in the sale of one fiber have assumed responsibility for selling all of the company's 5 fibers, A. M. Saunders, director of textile fibers sales, has announced. The move completes the step taken last March by Du Pont when regional sales offices were established under a manager responsible for the sale of all fibers in each region. In the new set-up, Mr. Saunders said, salesmen will function under the direction of an account manager who will manage sales to specific customers on a 5-fiber basis, thus eliminating duplication of salesmen's calls and providing improved service to customers.

Philadelphia Quartz Co. Marks 125th Anniversary

Philadelphia Quartz Co., manufacturer of soluble silicates, Philadelphia, Pa., completed 125 years in business July 21. The observance was marked on July 20 by a holiday for all employees. Founded in 1831, the firm originally manufactured soap and candles. Shortly before the Civil War, experiments were begun with silicate of soda as an ingredient for soap. By mixing the new chemical in the soap formula, it was found that it gave a decided improvement in the soap's washing action. Sales of silicates to other soapmakers required expansion and in 1864 a larger factory was built and the name Philadelphia Quartz Co. was adopted.

A second plant was opened in 1889 in Anderson, Ind., to serve an increased demand for silicates in the Midwest. In 1904,

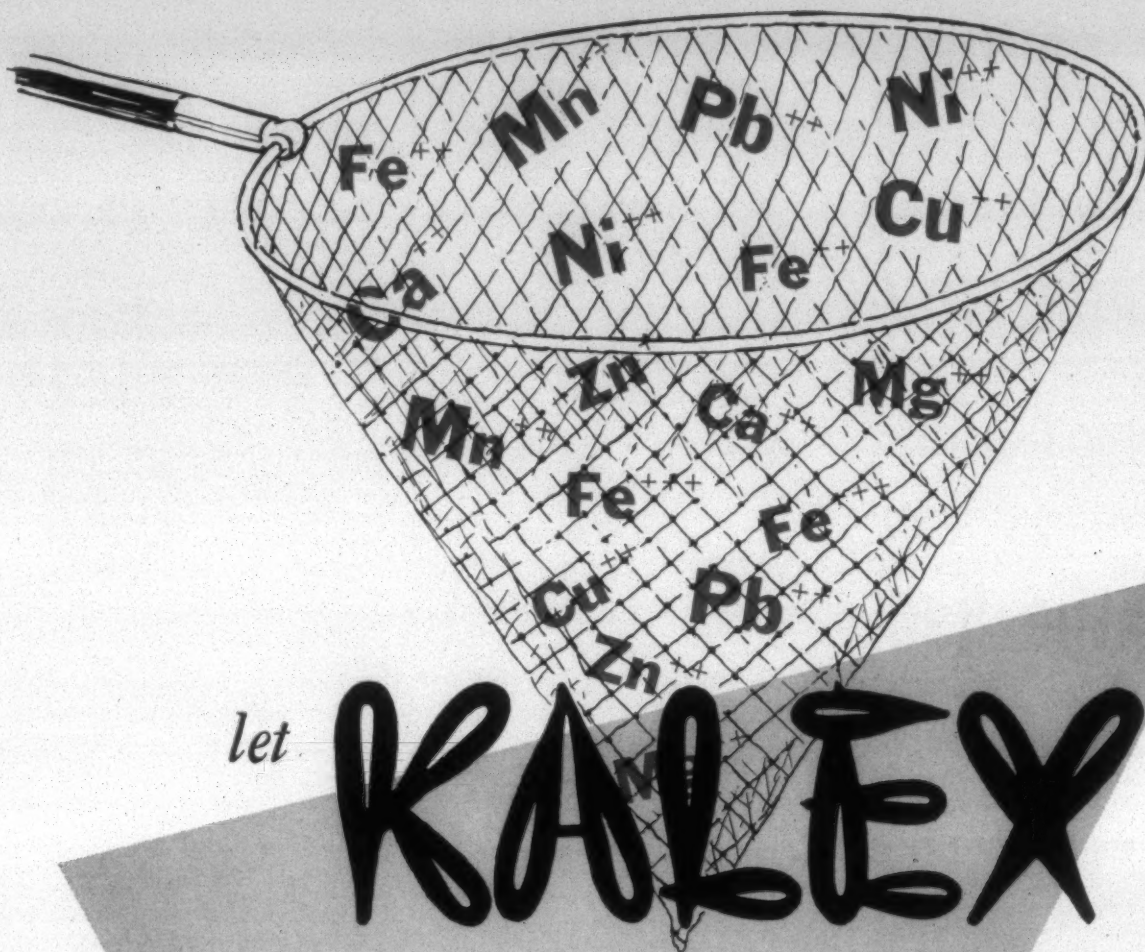


R. E. L. HOLT JR. AND ASSOCIATES INC., whose president and treasurer is R. E. L. Holt Jr., recently occupied this new office building at 1910 East Wendover Avenue, Greensboro, N. C. The firm represents Akron Spool & Mfg. Co. (twister spools and spinning bobbins), Ton-Tex Corp. (twister belts and fabric loom strapping), Rice Dobby Chain Co. (wirecore dobbie cords and canvas lugs), Norris Bros. (picker sticks and wood parts), Hayes Industries Inc. (aluminum bobbins, loom, section and triot beams), Stedco Southern Inc. (loom and warp bobbins), B. Snowiss Fur Co. (sheepskins, opossum and muskrat shuttle fur), Mitchell-Bissell Co. (porcelains and chrome-plated guides), Burlington Mills Corp. (nylon spinning tape), Pavia Shuttle Co. (shuttles), and Dixon Corp. (saddles, levers, stirrups, rolls).



Caudle, Sellars, Fritchman, Dunson, Skinner, McAbee, New Whittington, Blake, Holt, Brodie

The personnel of R. E. L. Holt Jr. and Associates Inc. include James F. Caudle Jr., David R. Sellars, H. D. Fritchman, W. Brad Dunson (manager of the Greenville, S. C., office at 5 Lawyer's Building), J. G. Skinner, C. A. McAbee, Floyd A. New, Miss Ellen Whittington, Mrs. Helen Blake, President Holt, and Mrs. Eleanor Brodie.



let

KALEX

clean up your caustics

Have you discovered the advantages of using Kalex compounds?

In binding and deionizing heavy metal and alkali earth ions in caustic solutions, these water-soluble organic ion exchangers exhibit remarkable chemical stability at *all* temperatures. In fact, the effective sequestering properties of Kalex compounds permit their use in a variety of textile operations — kier boiling, bleaching, mercerizing, dyeing sulfur colors and wherever traces of iron, zinc, copper, manganese, nickel, lead, magnesium and calcium are harmful.

KALEX E and KALEX IR are especially effective for complexing iron in caustic solutions; however, they also do an excellent job of chelating calcium, magnesium, copper, nickel and cobalt. Get in touch with us today and let us show *you* how KALEX products can improve your processes.



the Hart Products Corporation

1440 BROADWAY, NEW YORK 18, N. Y.

Works and Laboratories, Jersey City, N. J.

Hart Products Company of Canada, Ltd., Guelph, Ontario

19th SOUTHERN TEXTILE EXPOSITION

October 1-5, 1956
(Monday through Friday)

Textile Hall
Greenville, S. C.



See on exhibit latest developments in cost cutting, quality building machinery, equipment, supplies, techniques.

Show Hours: 9 A. M. to 6 P. M.

Make your plans to attend!

Rooms Reservations should be made in advance—Write

Textile Hall Corporation
Greenville,
South Carolina

*"An institution of the textile industry
since 1915"*

SERVING THE TEXTILE INDUSTRY—

the company reached another milestone when it was incorporated and the outdated plant in Philadelphia was replaced by a new factory at Chester, Pa. The Chester plant was devoted exclusively to manufacturing silicates and soap manufacture was discontinued.

Through research over a long period of years, a series of chemicals was produced by varying proportions of the ingredients of the silicate of soda, and many new applications were developed for a number of industries. Today the company has plants at Chester and Anderson and at Baltimore, Md.; Buffalo, N. Y.; Jeffersonville, Ind.; Kansas City, Kan.; Rahway, N. J.; St. Louis, Mo.; and Utica, Ill. An associate company, Philadelphia Quartz Co. of California, operates plants at Berkeley and Los Angeles, Cal., and Tacoma, Wash. Another associate is National Silicates Ltd., Toronto, Ontario, Canada. A new plant in Valleyfield, Quebec, will be completed by the end of this year.

Through 125 years, the company has maintained a direct connection with its beginnings. Thomas W. Elkinton, great grandson of the founder—Joseph Elkinton—is president of the company, the fourth member of the family to head the firm.

Hubinger Co. Celebrates 75th Year In Business

The Hubinger Co., Keokuk, Iowa, the oldest corn refining company in the U. S. and an important supplier to the textile industry, is currently celebrating its 75th year in business. The firm was founded in 1881 by J. C. Hubinger, who developed a laundry starch he produced in a home workshop into a door-to-door best seller. From that beginning the company has expanded to the point where today it manufactures a diversified line of some 125 products from corn.

American Rieter Co. Building New Quarters

The American Rieter Co. Inc., Arlington, N. J., recently broke ground for a new building on a tract of land in West Caldwell, N. J., situated on Passaic Ave. at the corner of Clinton Rd. The location is very convenient to Highways 46 and 53, about 15 miles from New York City. The new facility will enable the company to improve its maintenance and spare parts service. The building will also include a showroom for the exhibition of machinery manufactured by Joh. Jacob Rieter & Co. Ltd., Winterthur, Switzerland, for which American Rieter is sole U. S. agent.

American Cyanamid Plans New Creslan Acrylic Fiber

Nearly a decade of research and pilot plant development by American Cyanamid Co. were climaxed recently by the company's disclosure of plans for the large-scale commercial production of a new acrylic textile fiber trade-marked Creslan. The news that

Cyanamid had definitely decided upon a major capital investment to manufacture Creslan acrylic fiber was made known by K. C. Towe, president. Construction of the plant will begin in December, and according to present schedule, will be in production by the second half of 1958. Limited quantities of the fiber will be made available toward the end of this year from production at Cyanamid's pilot plant in Stamford, Conn. Full-scale marketing of Creslan will start about the middle of 1958.

In making the announcement, Mr. Towe also said that a site in northern Florida had been selected tentatively, but that final decision could not be made until complete details of the special problems involved in locating and building a chemical processing plant were worked out. Mr. Towe pointed out that plans for the plant were well along and that an annual production capacity of 27 million pounds, staple and tow, is envisioned with a 100% expansion potential embodied in the original plant design.

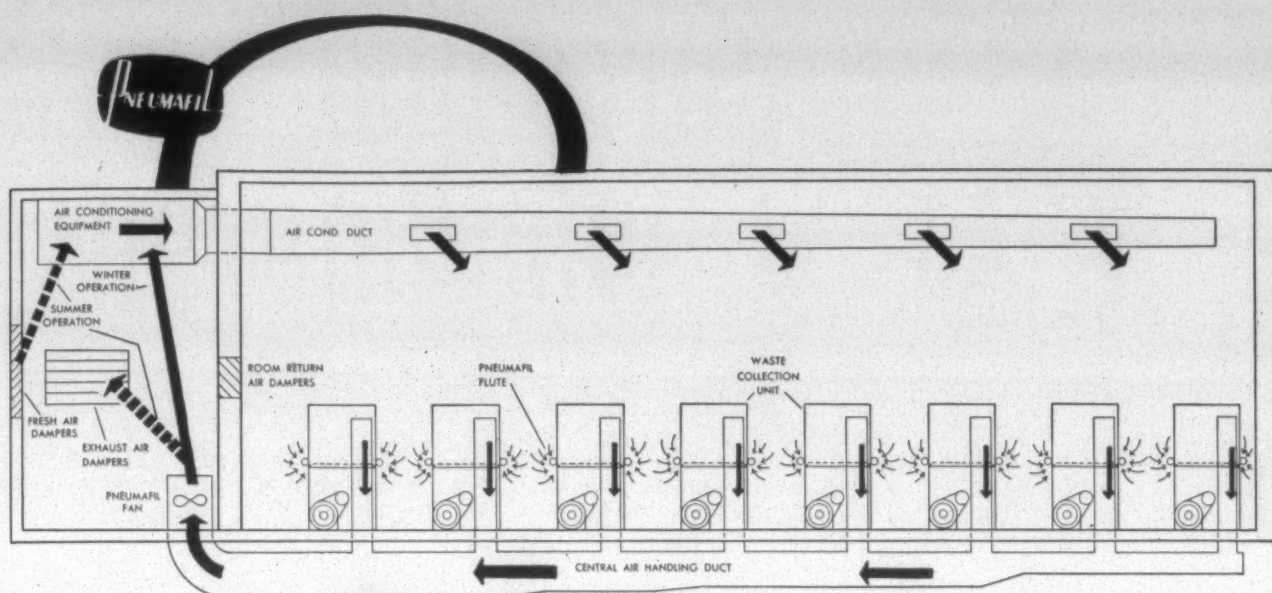
On the basis of extensive wear and end-use tests already completed, Mr. Towe stated that some of the applications of Creslan suggested are Jersey fabrics, sweaters, sportswear, blankets, fleeces and simulated fur fabrics, dresses, men's and women's suitings and overcoatings, children's wear, and certain industrial and non-woven fabrics. "We are convinced," Mr. Towe declared, "from the knowledge gained through nearly 10 years of research and a generation of experience in solving textile problems, that we have in Creslan a fiber of markedly superior dyeability that can be produced, processed and marketed successfully in a highly competitive field."

Allied Chemical & Dye Building Research Unit

Allied Chemical and Dye Corp. has begun construction on a new textile fiber application research unit near National Aniline Division's Chesterfield Plant, Hopewell, Va. The laboratory, which will be a modern textile mill in miniature, has been designed to provide immediate mill evaluations of Caprolan deep-dye nylon and Caprolan tensile-tough nylon as these products are delivered from the production line. This will mark the third step in Allied Chemical's quality control program for Caprolan—process inspection and evaluation, quality audit and, now, mill evaluation.

The new fiber application laboratory also will develop proper mill procedures for the processing of yarns and fabrics containing Caprolan nylon filament yarn and staple. Another phase of the laboratory's work will be the development and production of new fabrics for apparel, home furnishings, industrial and military goods.

The new facility is being erected on land adjacent to the fiber division of National Aniline's Chesterfield Plant which began commercial production of Caprolan nylon heavy yarns late last year. The research building, which will be of 1-story brick construction, will be equipped with temperature and humidity control units, and will contain about 20,000 sq. ft. of floor space. The building will be equipped with modern textile machinery for spinning, knitting, tufting and weaving.



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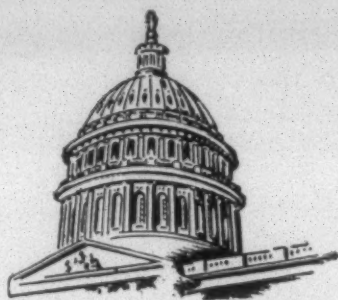
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WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Union leaders cannot quite decide whether to follow the historic precepts of the A.F.L., or go down the more recent road of the C.I.O. They are divided on whether to support robust industrial unionism, or favor organization by craft groups. Proponents of craft unions point out that with craft groupings the big steel strike would probably not have taken place. Some of them call it big stick unionism, already grown top-heavy.

The six-man organizing committee of A.F.L.-C.I.O. has been directed to proceed immediately to try to organize non-union textile workers in the South. Combined strength of the two unions in the field now is given as about 240,000, most of whom are in Northern centers. They formerly had, together, about 525,000 members. Merged union officials said as many of the 300 organizers on its staff as are needed will be assigned to the undertaking. No time limit is set for the duration of the drive, but President Meany said it would be "well financed."

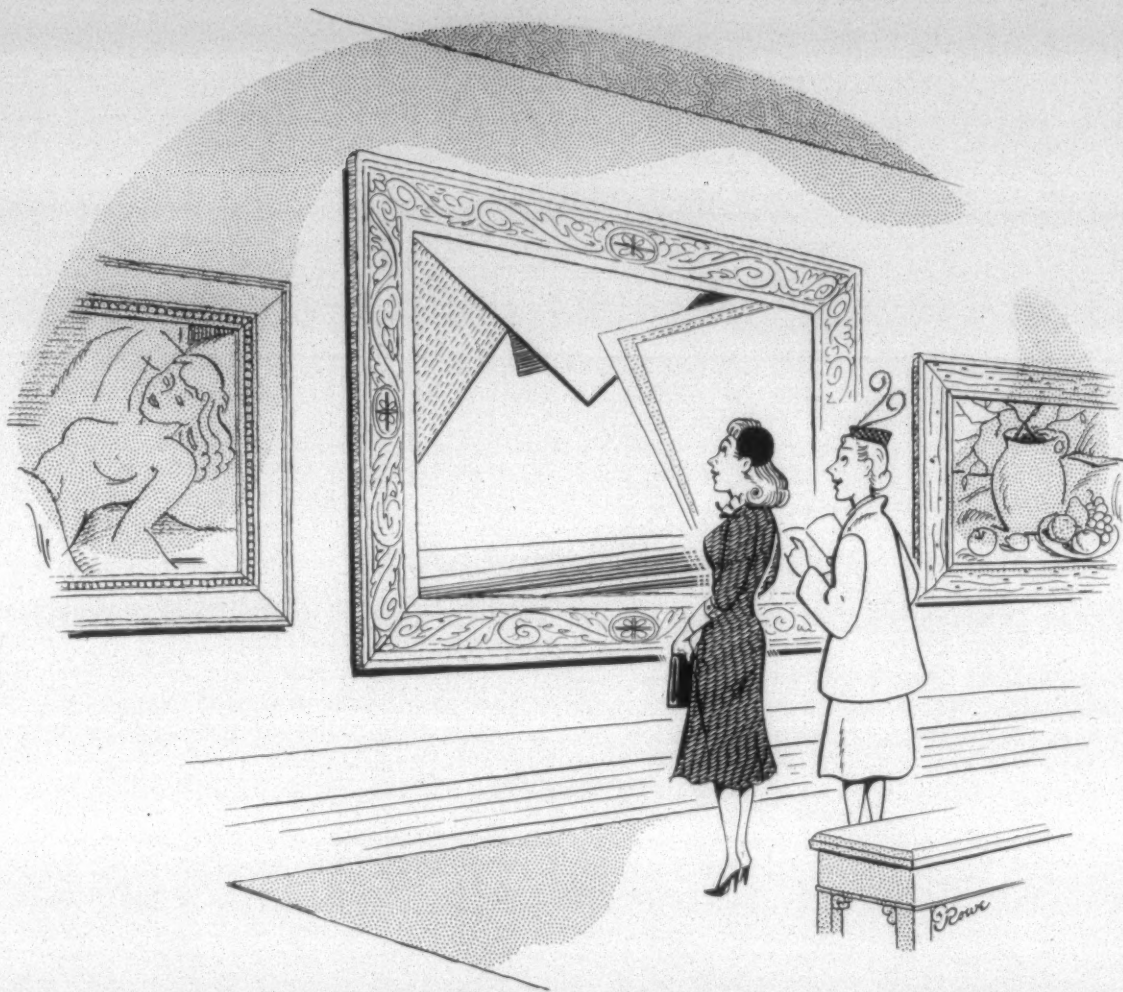
Textile unions are down now to their skimpiest and skinniest, and are in imminent danger of collapse and disintegration. The "organizing drive" in the South is more a salvage operation than anything else. The C.I.O. textile union had 425,000 members once. Now it is down to about 200,000 members, and its anemic A.F.L. counterpart, which once had 100,000 members, can scarcely count 40,000 now.

Chief reason for the rapid decline in both unions is found in the shift which industry has been making to the South, despite utmost union opposition. Much of the shift has been because of unreasonable wage demands upon mill owners, especially in New England. Some industries have had only the option, under the union pressures, of moving South or closing up for good.

Failure of both A.F.L. and C.I.O. unions to make headway in the South is due chiefly to themselves, and to their own internecine warfare. Workers have been made suspicious of their over-all intents through their advocacy of such things as integration. While the unions have charged "exploitation of labor" in the South, they have never proven the charge, and now they are compelled to admit, in Washington, that Southern mill owners are "doing much better by their workers" than are those in the North, weighted down with union exactions.

What the unions dislike most of all to admit is that conditions for textile workers in the South have improved far more than can be found in any part of the country in the past. They call it a "benevolent despotism," but admit it works fine, and provides good wages, good living conditions, swimming pools, recreation parks, low-cost seashore camps, gymnasiums, libraries and good schools. The question, openly admitted in relation to the "drive," is what can the union offer in addition?

The two textile unions have never recovered from the retching internal conflict that raged four years ago between rival leaders. Today neither union has capable and experienced leaders. The United Textile Workers (A.F.L.) is barely able to meet expenses, with an occasional handout from the big parent body. They admit that in cotton-rayon, 420,000 of the 500,000 employees are in the South, with only eight per cent of them in either union. Even if the two



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1956

unions merge, a remote possibility, a larger number of members can scarcely be expected.

Battle to repeal state right-to-work laws is being pushed into high gear by the unions with the action of Louisiana in repealing its law. Local union leaders have been instructed to actively take part in the election of state legislators this year, and to demand pledges of repeal votes by candidates before the election. The repeal battle is being carried into every state with a right-to-work law, or where there is possibility of enactment of one.

Inclusion of an amendment in the Foreign Aid Bill to restrict by quotas further increases in textile imports was voted down in the Senate Foreign Relations Committee. Offered by Senator Green (D., R. I.), the proposal would have restricted imports of any article made from a farm product of which this country has a surplus. It was intended to protect the cotton textile industry from Japanese imports. Spokesmen for the State, Commerce and Agriculture Departments came before the committee to oppose approval. They said the textile industry is in difficulty, but "this is not the way to solve the problem."

Two reappraisals of foreign aid by Congress have been started as a result of strong opposition in the House to prolonging it at the present level. The House is making its own study under Chairman Richards (D., S. C.) of its Foreign Affairs Committee, who led the fight to lop \$1.1 billion from the President's \$4.9 billion proposal. The Senate Foreign Relations Committee, more favorably disposed to continued aid, is starting its study, too.

The House Appropriations Committee put a firm ceiling of \$3.7 billion on foreign aid after Senate and House conferees had agreed to more than \$4 billion. If the lower ceiling of \$3.7 billion is sustained in passage, it will fix the sum of new money for foreign aid next year. But a strong effort will be made to restore it in passage in the Senate.

Economy-minded House members find that reduction in foreign aid grants is one of the toughest money spending problems they have faced. Heretofore the Senate has invariably wiped out House cuts, and then contended for half of the sum in conference. Aid spending is buttressed by a formidable bureaucratic organization, and an entrenched foreign lobby in Washington. The end of this spending in years to come is not in sight.

Higher prices and higher costs of living generally over last year are attributed by some of the government's leading economists as primarily due to higher minimum wages enacted last year. Wage costs, especially in small business, have grown substantially over the year, with growing demands on Congress to force the allocation of larger volumes of defense and other government orders to them. The higher minimums have also served, according to the economists, to implement the relocation of many industries in areas where living costs are less.

Provision has been inserted in the Defense Production Act calling for "geographical dispersal of industrial facilities" in relation to national defense. It covers the placement of defense orders with "dispersed" industries when, allegedly, in the interest of defense. Claim is that it is not iron-clad policy, but House members from every big industrial district rose in opposition to it.

Vigorous denial was made in the House that the dispersal proposal had any relation to national defense, or was a defense measure. It was described as a raid on the industrialized states on the part of states that are not largely industrialized, and "seeking to use national defense" as a bludgeon to carry out the raid. Labor unions that would be affected by the proposal, and many of whose members would become jobless under it, started an intense lobbying effort in the Senate to defeat the proposal, and carried their complaints directly to the President.

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textile bulletin

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A 'Me Too'—With Dubious Sincerity

With the foreign trade situation in such a mess, it would seem that the textile industry might welcome encouragement and help from any quarter. When one witnesses a belated yelp about imports and tariffs from the president of the Textile Workers Union of America, one wonders.

William Pollock, the aforementioned union official, does seem to be talking out of both sides of his mouth. Just last month, when interviewed by a reporter for the *Charlotte (N. C.) News*, Mr. Pollock declared that the Southern textile industry is not yet suffering from Japanese imports, and that "weeping and wailing" from the mills is largely a ruse to avoid paying employees "decent wages." Quoted further, he said that "they're exporting more than they're importing. They're making profits—but they want everybody to think they're in terrible shape."

Perhaps Mr. Pollock has been too busy consolidating and maintaining his position in the union to be aware of what has happened to various velveteen and gingham mills. Nevertheless, under date of June 21, a week prior to his outspoken interview at Charlotte, he wrote as follows to F. E. Grier, president of the American Cotton Manufacturers Institute:

Dear Mr. Grier:

Like your organization, we have been much concerned with the influx of Japanese imports. The voluntary quotas developed by the Japanese to control their exports are not adequate to safeguard our industry. More formal American controls must be established to prevent serious damage to an industry already harassed by technological and other business problems.

We have followed your efforts to secure Congressional support for limitations on imports. We have lent a helping hand in these projects, but the results have not been satisfactory. A more extensive program is essential to provide long-term protection.

To interest the American people, the Congress and the Administration in supporting an adequate protective program, the various interests of our industry must be brought together in a joint effort.

Recent attempts have been limited to appeals to friendly Congressional representatives and specific business interests. The results establish conclusively that their support is not sufficient.

In order to broaden the appeal, the public must be addressed not only by business but also by the labor and consumer interests. We are prepared to join with you in developing such a program.

We urge you to consider this idea, and suggest an early meeting to devise practical recommendations for such an appeal for general support to help maintain the economic health of this industry.

WILLIAM POLLOCK
General President

You don't tell the firemen to stay out of your house because they might track up the lawn. But you'd prefer that local jail inmates not be turned loose to help out; there would be some risk that your furniture might be stolen. So, Mr. Grier replied thusly:

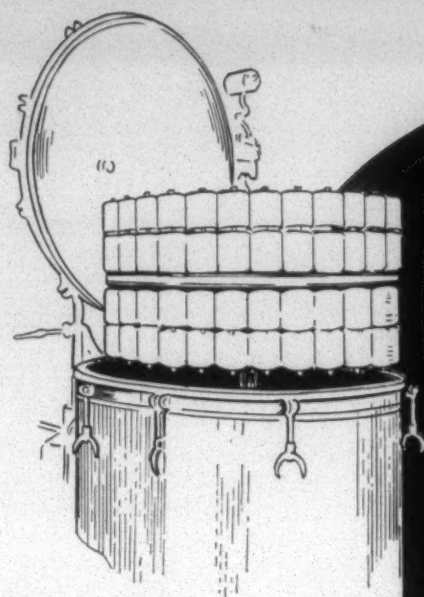
Dear Mr. Pollock:

We have received your letter of June 21 and have noted your expression of concern regarding the damaging influx of Japanese imports, and we have also noted your recent press statements that such imports are not hurting the textile mills and their employees.

As long ago as 1953, the American textile industry and its employees were saying that a Japanese industry, rebuilt in large part with American tax money, might one day spell doom for more than two million jobs in this country. The recent closing of Camperdown Mills, Greenville, S. C.; Consolidated Textile Co., Martinsville, Va.; Luther Mfg. Company, Fall River, Mass.; and Windsor Print Works, North Adams, Mass., as well as extensive curtailment in many other mills, constitute dismaying evidence of the devastating effect of our government's foreign trade policy.

With this background in mind, we find it difficult to reconcile your letter of June 21 with recent public statements you have made on this question. For example, *The Charlotte News* of June 28, 1956, in a story headed "IMPORTS SAID NOT HURTING MILLS," quotes your remark that the textile industry is not suffering from Japanese imports and that "weeping and wailing from the mills is largely a ruse to avoid paying employees decent wages." You note in your letter the importance of informing the American people, the Congress and the Administration of the dire need for quotas on Japanese imports, but your press statement of June 28 accomplishes the exact opposite effect.

The textile industry needs badly a broad public understanding of its life and death struggle, but your contradictory statements



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President

Not for a minute do we suspect that Mr. Pollock is as benighted as the editorial writer of the *Des Moines (Iowa) Tribune*. This writer devotes nearly all of a column to the standard "free trade" talk, then winds up his dissertation as follows:

The interest of the *whole* United States clearly is in the direction of encouraging Japanese imports to the United States. Even if American foreign policy and defense strategy did not demand this, the general interest in reducing foreign economic aid to Japan by permitting the Japanese to earn their way in the world would demand it.

Here is a clear-cut case where the national interest must take precedence over the special interest of one industry.

This does not mean that the people in the textile industry must be allowed to go down the drain to economic disaster. The government might well provide assistance to the firms and their employees to convert to other lines of production or to improve their efficiency so that they can meet the Japanese competition.

It would be reckless and unprincipled of Congress to relieve the textile industry by means of trade barriers against Japanese goods.

That argument is not surprising when you consider that the State of Iowa contains something around 100 knitting machines, 75 looms and 5,500 spindles. Maybe they had better watch the Japanese threat in respect to the portion of those spindles turning out "baseball yarns," because baseball is a big thing in Japan; but as Iowa bereft of textile manufacturing, we suspect, wouldn't go into economic chaos. Of course, Iowa does grow corn—right much of it. A good portion of its corn crop makes its way into sizing used by the textile industry, and figures probably show that corn starch consumption by textile mills has some correlation to the industry's operations.

It is appreciated that the Iowa editor does not want to see the textile industry "go down the drain to economic disaster." He may even be thinking about his state's corn crop. He isn't indulging in very clear thinking when he suggests that the government assist the mills in improving their efficiency. That is hardly feasible when one considers what effect bureaucracy has had in other elements of the economy. Obviously what is needed is even less federal intervention. Washington tells our industry that it must have a wage rate ten times what the Japanese worker is paid. Washington sees that the Japanese can buy American cotton, landed in Japan, cheaper than American mills can buy it. Washington sends emissaries to international convocations with instructions to lower tariffs even further.

Perhaps the textile industry could clear its mental decks for the ultimate solution to this problem if Washington would just say what portion of the American textile industry it plans to turn over to Japan. Then we might know what has to be done.

Perhaps, as the Iowan suggests, the government might provide assistance to textile firms to convert to "other lines of production." We can assume that the owners of mills, as some of them already have done, can find places to invest their capital which offer greater profit potential and security than does textile manufacturing. Suppose a lot more of them do this. The cotton farmers, for sure, would lose their biggest customers. But then, a government—whether Democratic or Republican—always takes care of capital "A"

Agriculture. But what about all the people who work in the mills. Does the government have a plan for them?

So, it might be well for the government to call in its experts from the State Department, the Commerce Department, the Agriculture Department, and by all means the Labor Department. Give us a timetable of the plans for dissipation of the textile industry. With such an announced pattern, maybe management can get out of the textile industry still breathing. The people? Those that work in the mills? They can then be a government problem. Maybe Mr. Pollock, the labor expert, will have some ideas. He, too, will be available for employment.

A Subdued 'Operation Dixie'

Presumably having no other face-saving choice, the 29-man A.F.L.-C.I.O. executive council has announced it will proceed with its one-time ambitiously planned second "Operation Dixie" to bring the largely unorganized textile industry into the labor union camp, even though the two rival textile unions are still squabbling over the dividing up of organizing targets and there are loud rumblings of a schism of the South's labor forces because of the national unions' anti-segregation policies.

It has been quite evident, of course, and it has been implied or admitted in responsible statements by union officials, that racial attitudes of the rank-and-file Southern worker and the failure of the two textile unions to merge in any sense of the word have been stalling the heralded membership drive in the South, if not having actually stopped it in its tracks, or even before it could get under way.

Significantly, perhaps, there is no inclination on the part of the organized labor leadership to refer to the planned Southern maneuver or campaign as an "Operation Dixie." In fact, there apparently isn't going to be an "Operation Dixie" in the sense that an attempt is going to be made to organize every Southern mill. The membership drive is apparently aimed at trying to strengthen the established locals and at organizing new ones, the initial targets being the large multi-plant firms.

It seems quite obvious in any realistic appraisal of the situation that the A.F.L.-C.I.O. Textile Workers Union of America faces extreme difficulties in any future attempt to organize Southern workers since, despite the hard protests of Southern delegates, its recent ninth biennial convention went on record as denouncing Southern White Citizens Councils and in favor of racial integration in public schools. This turn of events has rocked Southern unionists, but if it causes some amusement among Southern management, it should not tend to lull management into any sense of complacency, for the present or for the long range.

While recent efforts to merge the former C.I.O. Textile Workers Union of America (T.W.U.A.) and the former A.F.L. United Textile Workers of America (U.T.W.A.) have collapsed, A.F.L.-C.I.O. leaders say such an eventual merger is still anticipated. How and when this comes about, however, remains to be seen, as there seems to be too many cooks in the labor kitchen and none of them wants to lose his job when the two restaurant chains combine.

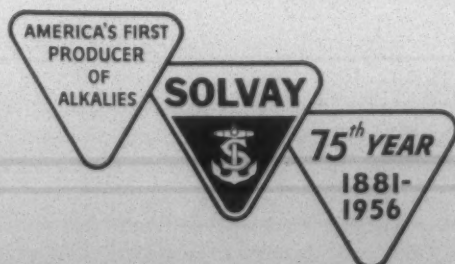
The latest announced A.F.L.-C.I.O. plan to throw hundreds of organizers into textile towns, mostly in the South,



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apparently involves, according to the press statements in Washington, the allocation of newly organized members between the former T.W.U. and the former U.T.W. It has been A.F.L.-C.I.O. policy to withhold federation organizing aid where rival unions have unreconciled claims in the same field. The A.F.L.-C.I.O. decision to go ahead with the long-contemplated Southern drive apparently involves waiving this policy, at least insofar as organizing the Southern textile industry goes.

"We decided we couldn't wait any longer," said A.F.L.-C.I.O. Secretary-Treasurer William Schnitzler in announcing the Southern drive to Washington newsmen. "We've got to move ahead with the job." And he specifically mentioned Burlington Mills and J. P. Stevens & Co. among the initial multi-plant targets. According to T.W.U.A. Southern Regional Director Boyd Payton, the T.W.U.A. uses four steps to organize: surveys, build-up campaign, petition for election, and election. He said there are 28 Southern mills now under "survey." Mills in the "build-up" stage are Cannon at Kannapolis and Concord, N. C.; Avondale at Alexander City, Pell City and Sylacauga, Ala.; and Pepperell at Abbeville, Ala., and Lindale, Ga. "Campaigns" are being conducted at Darlington, S. C., and Chatham Mfg. Co., Elkin, N. C. Election petitions have been filed, or will be filed, at the Valdese Mfg. Co., Valdese, N. C.; Empire Mfg. Co., Statesville, N. C.; Spofford Mills Inc., Wilmington, N. C.; and Hyde Park Mills, Covington, Tenn.

Southern delegates not only protested against passage of the racial integration resolution at the T.W.U.A. convention but walked out en masse after the resolution was approved by a better than two to one majority. Some Southern delegates expressed concern the resolution will not only block new organizational efforts but might even break unions in plants where there are now contracts. However, T.W.U.A. Southern Regional Director Payton sought to allay such fears and said that while the walkout doesn't mean a split in Southern organized labor he was fearful it might be used as a lever to cause a split. Conceding there might be a "slight" move for secession, he said, "the majority will stay with T.W.U.A."

Some rather sharp reaction has followed the anti-segregation policies proclaimed by national labor unions. For instance, a city ordinance in Dublin, Ga., now requires organizers to swear they will not violate local segregation laws, nor may they furnish money for the repeal of segregation practices.

No one, of course, is more fully aware than the labor leaders themselves of the hard nut they have to crack in organizing the independent Southern worker. No one, of course, is more fully aware of the impact upon the sensibilities of the Southern worker that their push for racial integration naturally causes. Certainly such an action was never lightly taken. As the *Greenville* (S. C.) *News* commented, the national labor leaders, like the leaders of both national parties, are "playing a long-range game for big stakes, and the objective is power." Racially integrated unions, bolstered by numbers and dues from Negro members, would give leaders of organized labor an even more potent political force than they now have, and quite obviously, racially integrated schools would have to be part of such an over-all pattern. And, just as obviously, labor

leaders need no crystal ball to tell them that newly-organized masses of Negroes would be more amenable to discipline and easier to manipulate than the independent white Southerner.

Likewise, it takes no crystal ball to perceive that in the South the vast majority of white people and the workers agree with the state laws and feel that the U. S. Supreme Court usurped powers that the Constitution does not give it when it ruled segregated schools must go. The reaction to national labor policies has been manifest among the ranks of various organized workers in the South other than textile operatives.

Resentment over national union policy favoring integration has been voiced by the rank and file in Alabama, Florida, Tennessee and the Carolinas. For instance, in Augusta, Ga., 37 of the 182 members of Local 177 of the Municipal Employees Union, made up of employees of the city's street and drains department, resigned from the union, an affiliate of the A.F.L.-C.I.O., as a result of the national organization's declared intentions to end segregation within labor unions.

It is perhaps too early to diagnose just how wide a split in the labor movement in the South may be developing. But there are some very significant straws in the wind, so to speak. There has, to cite merely one of these, a recent report by H. L. Mitchell, an official of the A.F.L.-C.I.O. Agricultural Workers Union, warning that the A.F.L.-C.I.O. is in considerable danger of being wiped out in the South.

Recent weeks, too, have seen the organization of the Southern States Conference of Union People in Chattanooga, Tenn. Its leader is Arthur A. Canada, a member of the Pressman's Union in Chattanooga who is also president of the Tennessee Society to Maintain Segregation. The group has mailed out 10,000 copies of a resolution to various union members in Tennessee asserting that the national A.F.L.-C.I.O. leadership has aided integration and contributed union funds to the National Association for the Advancement of Colored People. However, President Canada says the new labor organization intends to fight such policies within the framework of the union movement itself.

In Birmingham, Ala., a heavily industrialized and organized city, R. E. Farr, district director of the United Steel Workers, denied that any of his men were thinking of pulling out of the national U.S.W. It would be impossible, he said, because all the union's money is banked in the name of the national organization, which also owns the union's property.

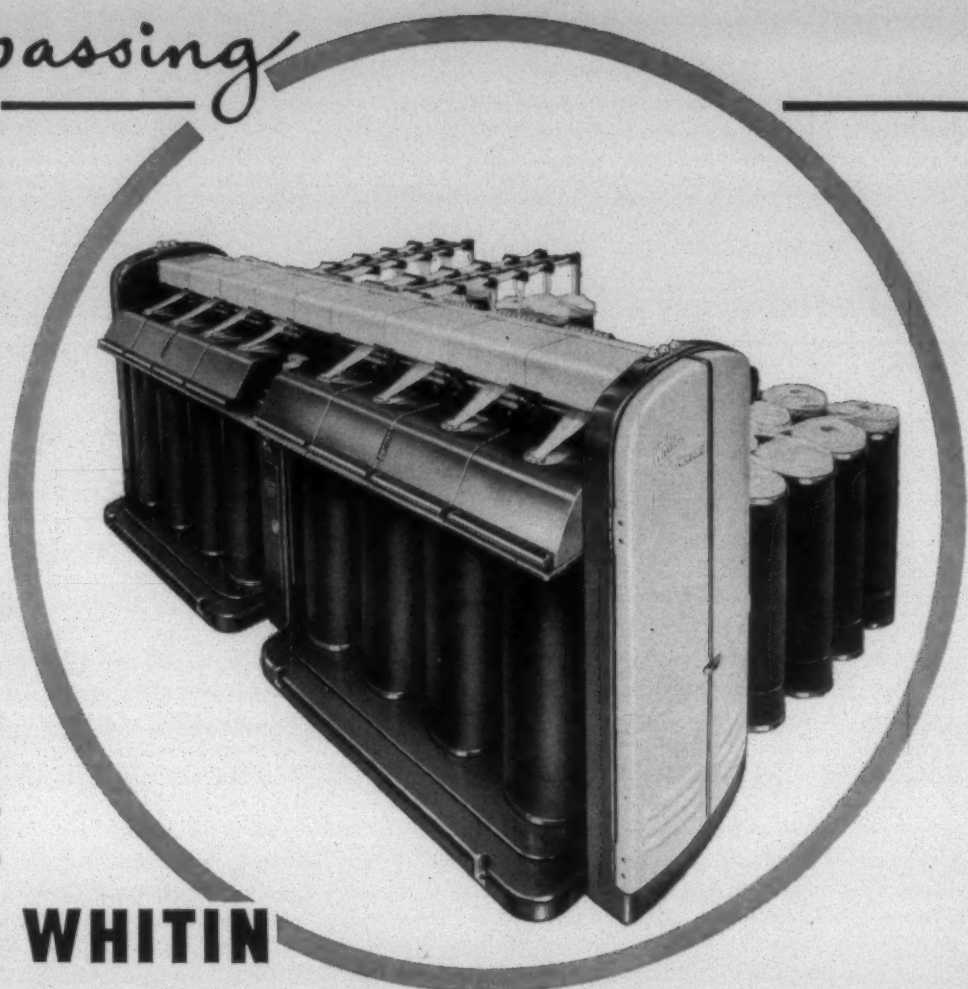
Another practical consideration is, of course, the existence of contracts between employers and the international unions. Secession could lead to a fight in some or many Southern industrial plants as to whether the international local or the rebel local unit is the bargaining agent.

As for textiles, where there are already rival unions within the merger framework, there is more than one facet to the apparently widening schism. Toward the end of May the U.T.W.A. agreed to a new contract with Dan River Mills at Danville, Va., which contained no wage increase. And Emanuel Boggs, joint board manager of U.T.W.A. for southern Virginia, said he had little hope for general increases this year.

This was followed, however, by a statement from T.W.U.A. Southern Director Payton at Charlotte that the failure of the U.T.W.A. to negotiate a raise at Dan River

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- From 250-300 feet per minute
Front Roll Delivery

Production two to three times more than conventional machines, depending upon mill conditions and production needs.

- For all fibers up to 3"

The first universal drawing frame — for cotton, spun synthetics and blends.

- Outstanding Sliver Quality

Improved uniformity in both carded and combed sliver — 6 or 8 ends up.

- Pneumafil Clearer Units

A brand new way of removing waste fibers. Developed for, and an integral part of, this machine.

- Entirely New Design

Two independent four-delivery heads, vibration proof construction; precision tolerances; anti-friction bearings; unique four over five roll drafting; new overarm weighting; no-twist can table; electronic stop motions and signal lights; 14" — 15" — 16" cans, 36" or 42" high.

TRADE MARK



Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

EDITORIALS

"will have no bearing on the current demands of T.W.U.A. for substantial pay raises in Southern states mills."

Shortly thereafter came the strike, which has been backed all the way by the T.W.U.A., at the Rock Hill (S. C.) Printing and Finishing Co. of M. Lowenstein & Sons, after two months of negotiation broke down. The union is asking a 25-cent an hour increase, a pension plan and other fringe benefits.

William Pollock, who recently became president of T.W.U.A. when Emil Rieve retired, during a three-day conference at Charlotte with union sub-chiefs from Southern states, informed the press that the Rock Hill strike, which he term "a good one," was a purely local decision and not "an idea handed down from New York." As this is written, the Rock Hill plant has resumed operation around the clock with about half its normal work force.

The leadership of the national unions, or the national unions themselves, in fact, have declared what amounts to war on the Southern way of life, and there is certainly no indication at this point that there is going to be any change or compromise in their adamant attitude.

The union member in the South—and the potential union member—is squarely up against making a choice between unionism and the things he considers his inalienable Southern heritage. The big unions are against racial segregation, and no holds barred; and on top of it all, Walter Reuther has been castigating the Southern wing of the Democratic Party as a "liability" and implies, or actually says, in fact, he's ready to bolt the Democrats unless the Southerners are dumped, completely and ignominiously.

And the union leaders who concocted the bitter stew that is now dished up for serving have been trying to make it a little more palatable by loudly contending in the press and

elsewhere that the white Citizens Councils, the revived Klan and, in fact, all the various pro-segregation organizations of one kind or another in the South, are dedicated not only to preserving the traditional segregation patterns of Dixie but to fighting the labor unions through exploitation of racial prejudice.

It can, of course, be naturally assumed by anyone that there are some union members and industrial and craft workers in these pro-segregation organizations, but just to what extent can only be a matter of conjecture or speculation. However, that such a condition exists to the extent of sorely troubling the national union officials is fairly obvious. And the many published reports that the "imperial wizard" of the presently revived Klan, E. L. Edwards, actually is a dues-paying member of Mr. Reuther's Auto Workers Union in Atlanta, have gone undenied. The Klan in some parts of the South has, in fact, been boasting of a wide following among the ranks of Southern labor.

Actually, from the statements dropped here and there, it would appear that the greatest worry or concern of union leadership at the top level is not so much the incipient Southern labor secession movement *per se*. This is quite understandable because at the regional and state levels the labor leaders are quite acutely aware of their dependence on financial support of the big unions. Deepest concern of the top level leaders seems to be the realization that a slackening of union morale in the South not only undermines the solidarity necessary for any further gains and tough collective bargaining, but makes the parent unions even more vulnerable than ever before to various pressures, political and/or economic.

As the developing situation unfolds, one thing seems very clear, from any angle from which it can be viewed: the union chefs are finding it's a rather indigestible stew that they have hashed up, and would seem to have no other alternative now but to swallow it.

TEXTILE INDUSTRY SCHEDULE

— 1956 —

- Sept. 6-7 (Th-F)—Fall meeting, **THE FIBER SOCIETY**, Warwick Hotel, New York City.
- Sept. 10-15 (M-Sa)—**PERKIN CENTENNIAL** (sponsored by various professional societies and trade associations), Waldorf-Astoria Hotel, New York City.
- Sept. 13-15 (Th-Sa)—National convention, **A.A.T.C.C.**, Waldorf-Astoria Hotel, New York City.
- Sept. 20-21 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSN.**, Look-out Mountain Hotel, Chattanooga, Tenn.
- Sept. 27-28 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSN.**, Cavalier Hotel, Virginia Beach, Va.
- Oct. 1-5 (M-F)—19th **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.
- Oct. 3-4 (W-Th)—**CHEMICAL FINISHING CONFERENCE** (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.
- Oct. 6 (Sa)—Annual meeting, **PIEDMONT SEC.**, A.A.T.C.C., Charlotte (N. C.) Hotel.
- Oct. 11-12 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MFERS. ASSN.**, The Carolina, Pinehurst, N. C.
- Oct. 13 (Sa)—**TEXTILE OPERATING EXECUTIVES OF GEORGIA**, High-tower Textile Building, Georgia Institute of Technology, Atlanta.
- Oct. 16-19 (Tu-F)—**COMMITTEE D-13 ON TEXTILES, AMERICAN SOCIETY FOR TESTING MATERIALS**, Warwick Hotel, New York City.
- *Oct. 18-19 (Th-F)—**SOUTHERN TEXTILE METHODS AND STANDARDS ASSN.**, The Clemson House, Clemson, S. C.
- Oct. 22-26 (M-F)—**NATIONAL SAFETY CONGRESS AND EXPOSITION** (sponsored by National Safety Council), Chicago, Ill.

- Oct. 25-26 (Th-F)—Annual meeting, **CARDED YARN ASSN.**, Hotel Fort Sumter, Charleston, S. C.
- *Oct. 27 (Sa)—**ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn.
- Nov. 1-2 (Th-F)—**PERSONNEL DIV.**, S. C. **TEXTILE MFERS. ASSN.**, Ocean Forest Hotel, Myrtle Beach, S. C.
- Nov. 27-30 (Tu-F)—**NATIONAL CHEMICAL EXPOSITION** (under auspices of American Chemical Society), Cleveland (Ohio) Public Auditorium.
- Dec. 1 (Sa)—**SOUTH CENTRAL SEC.**, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.
- Dec. 4-5 (Tu-W)—Conference, **COATED FABRICS DIV., SOCIETY OF THE PLASTICS INDUSTRY**, Hotel Commodore, New York City.
- Dec. 8 (Sa)—**SOUTHEASTERN SEC.**, A.A.T.C.C., Atlanta, Ga.

— 1957 —

- Jan. 28-29 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, St. Louis, Mo.
- Feb. 27-Mar. 1 (W-F)—**COTTON RESEARCH CLINIC** (sponsored by National Cotton Council), General Oglethorpe Hotel, Savannah, Ga.
- Apr. 4-6 (Th-Sa)—Annual convention, **AMERICAN COTTON MFERS. INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.
- Apr. 9-11 (Tu-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), International Amphitheatre, Chicago, Ill.
- May 1-2 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Clemson House, Clemson, S. C.
- *June 20-22 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, Ocean Forest Hotel, Myrtle Beach, S. C.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

*Listed for the first time this month.

‡Tentative listing.

†Changed or corrected from previous issue.

"Situated to Serve"

the growing textile industry!



CAUSTIC SODA

Liquid 73%

Liquid 50%, Regular, Rayon
and Low — Chloride Grade

Flake, Solid and Ground, 76% Na₂O

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with one of the largest single electrolytic caustic-chlorine
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serve your needs. Whether your mill is in New England
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Like so many other outstanding producers of textile fibers
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STAZON to assure cleaner yarn

THE IDEAL top roll lubricant is *Texaco Stazon*—because it *stays* on the bearing surfaces, *off* the yarn. *Texaco Stazon* won't splatter, creep or drip—and that makes it an excellent loom lubricant, too. It assures cleaner yarn and fabric.

Texaco Stazon is easy to apply and has a long service life. It does not form gummy deposits and is not affected by humidity. *Texaco Stazon* assures normal operating temperatures, low power consumption and longer bearing life.

For spindle lubrication, use *Texaco Spindura Oil*—approved by manufacturers of all types of spindles. For fiber conditioning, use *Texaco Texspray Compound*—it assures smoother, stronger yarn.

Throughout your mill, *Texaco* specialized lubricants can help you reduce costs. A *Texaco* Lubrication Engineer will gladly give you details. Just call the nearest of the more than 2,000 *Texaco* Distributing Plants in the 48 States, or write:

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TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

S. T. A. Convention

Mill Managers Have Some Fun, Deal With Current Problems and Elect Pittendreigh President

MORE than 600 persons attended last month's annual convention of the Southern Textile Association at Blowing Rock, N. C. Highlighting the meeting were two business sessions, the first held on Friday morning, June 22. Speakers at this session were Erle Cocke Jr., vice-president of Delta Air Lines, Atlanta, Ga.; W. A. Newell, coordinator of research, School of Textiles, North Carolina State College, Raleigh; and Frank Constangy, attorney, Atlanta, Ga.

Keynote speaker at the final business session, which closed the three-day meeting, was F. E. Grier, president of the American Cotton Manufacturers Institute, and president of The Abney Mills, Greenwood, S. C. James A. Chapman Jr., outgoing president of the S.T.A., was also a feature of the closing business meeting, delivering the traditional remarks of the retiring president. (Speakers' texts are covered elsewhere in this report.)

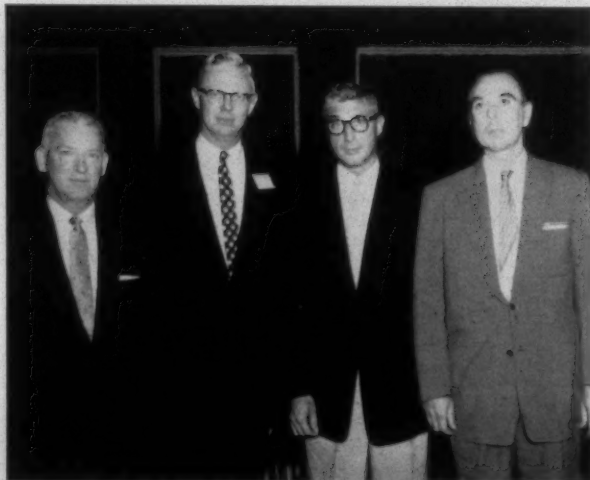
In an election of officers at the close of the convention, W. M. Pittendreigh, Riegel Textile Corp., Ware Shoals, S. C., was named president of the association for the coming year, succeeding Mr. Chapman, who was automatically elevated to chairmanship of the association's board of governors. Mr. Pittendreigh, who served last year as second vice-president of the S.T.A., and is a former chairman of the association's South Carolina Division, was named to the presidency as the result of H. C. Estes, Pacific Mills, Rhodhiss, N. C., declining the presidential nomination. Mr. Estes, 1955-56 first vice-president, would have by custom been elevated to the presidency, with Mr. Pittendreigh succeeding him as first vice-president.

Elected to fill the vacant vice-presidents' posts were Horace Pennington, Cone Mills Corp., Greensboro, N. C., who was named first vice-president; and Walter Vincent, Dan River Mills Inc., Danville, Va., second vice-president. Messrs. Pennington and Vincent both have been active in the association's Northern North Carolina-Virginia Division for many years. Mr. Pennington for the past three years has served as a member of the board of governors, and also as a member of the association's executive committee. Mr. Vin-

cent had served as a board member for the past five years. Their election places them in line for succession to the presidency in 1957-58 and 1958-59, respectively.

Also elected at the closing session were six members to the board of governors. Named to serve three-year terms expiring in 1959 were D. H. Roberts, Lydia Cotton Mills, Clinton, S. C. (re-elected); J. C. Farmer, Henderson (N. C.) Cotton Mills; M. L. Brackett, Highland Park Mfg. Co., Charlotte, N. C.; and L. A. Crawford, Joanna (S. C.) Cotton Mills Co. Two other board vacancies, created by the election of Mr. Vincent as second vice-president and the resignation of J. R. Meikle, Rosemary Mfg. Co., Roanoke Rapids, N. C., were filled with the election of Jesse Boyce, Erwin Mills Inc., Durham, N. C., and Rodger Hughes, Reeves Bros. Inc., Spartanburg, S. C., to one-year terms expiring in 1957.

Continuing board members are J. P. Carter, Spartan



Pennington, Chapman, Pittendreigh, Vincent

1956-57 officers of the Southern Textile Association are Horace Pennington, first vice-president; James A. Chapman Jr., chairman of the board of governors; William M. Pittendreigh, president; and Walter Vincent, second vice-president.

Mills, Startex, S. C.; W. B. Etters, Reeves Bros. Inc., Spartanburg, S. C.; Joseph F. Chalmers, Greenwood Mills, Greenwood, S. C.; R. M. McCrary, Carolinian Mills Inc., High Shoals, N. C.; Herman Cone, Cone Mills Corp., Greensboro, N. C.; and L. W. Thompson, Riverdale Mills, Enoree, S. C. Ex-officio members of the board include divisional chairmen and all past presidents. James McAden and Jack Kissiah, both of TEXTILE BULLETIN, continue as secretary-treasurer and assistant secretary-treasurer, respectively.

Social activities at the convention included cocktail parties on Thursday and Friday evenings; an 18-hole Callaway System golf tournament at the Blowing Rock Country Club; a "Millionaires' Party" on Thursday evening; a bingo contest Friday afternoon; and a floor show Friday night. As usual, the Associate Members' Division of the association contributed heavily to the convention's lighter side, furnishing the prizes for the golf tournament; underwriting the two social hours; providing a shuttle bus for members with accommodations other than at the Mayview Manor; and



McAden, Crawford, Willard, Thompson, Carter, Holt, Hughes
Ward, Roberts, McCrary, Delany, Stafford, James, Chalmers
Brackett, Jenkins, Etters, Purcell, Crow, Cone
Pennington, Pittendreigh, Chapman, Vincent

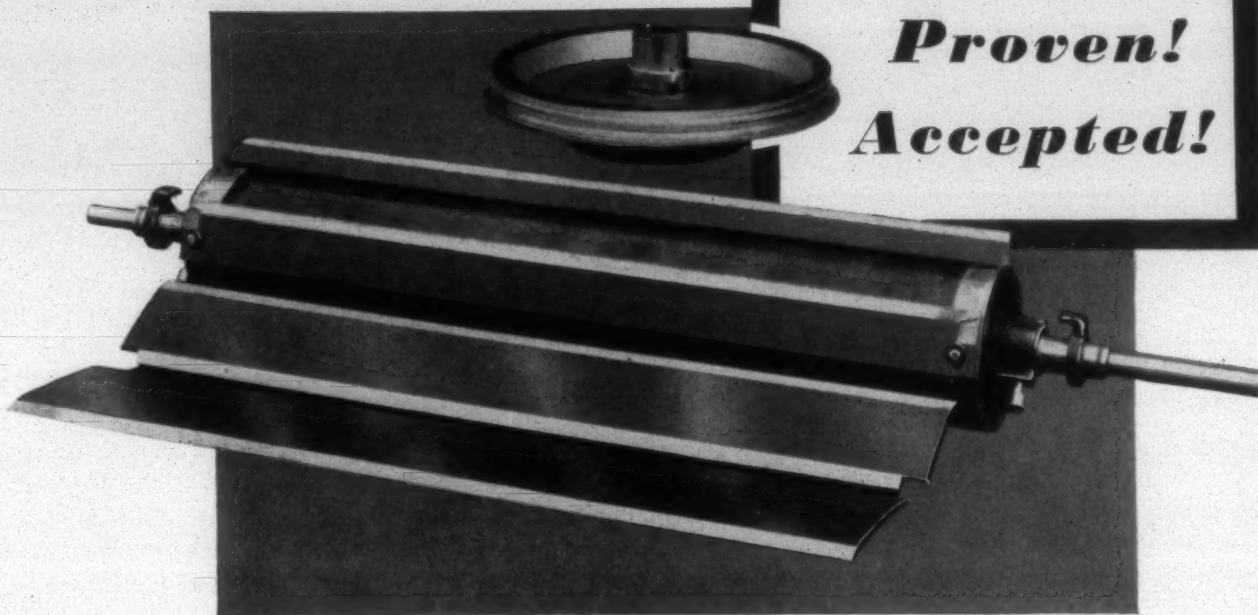
Southern Textile Association "brass" indulged in its first activity of 1956-57 by posing for this picture following conclusion of this year's convention at Blowing Rock, N. C. On the first row are Horace Pennington of Cone Mills Corp., Greensboro, N. C., first vice-president; William M. Pittendreigh of Riegel Textile Corp., Ware Shoals, S. C., the new president; James A. Chapman Jr. of Inman (S. C.) Mills, retiring president and new chairman of the board of governors; and Walter Vincent of Dan River Mills Inc., Danville, Va., second vice-president.

Second row: M. L. Brackett of Highland Park Mfg. Co., Charlotte, N. C., new board member; Joe Jenkins of Kendall Cotton Mills, Edgefield, S. C., chairman of the South Carolina Division; W. B. Etters of Fairforest Co., Spartanburg, S. C., continuing board member; D. A. Purcell of Fieldcrest Mills Inc., Fieldale, Va., past president; Smith Crow of Erlanger Mills Inc., Lexington, N. C., past president; and Herman Cone Jr. of Cone Mills Corp., Greensboro, continuing board member.

Third row: Charles H. Ward of Highland Cotton Mills, High Point, N. C., chairman of the Northern North Carolina-Virginia Division; D. H. Roberts of Lydia Cotton Mills, Clinton, S. C., re-elected to the board; R. M. McCrary of Carolinian Mills Inc., High Shoals, N. C., continuing board member; Joe L. Delany of Joanna (S. C.) Cotton Mills, past president; T. I. Stafford of Clifton (S. C.) Mfg. Co., past president; J. L. James of Randolph Mills Inc., Concord, N. C., retiring chairman of the board and past president; and Joseph F. Chalmers of Greenwood (S. C.) Mills, continuing board member.

Fourth row: James McAden Jr. of TEXTILE BULLETIN, Charlotte, secretary-treasurer; L. A. Crawford of Joanna Cotton Mills, new board member; Clarence S. Willard of Pacific Mills, Rhodhiss, N. C., chairman of the Piedmont Division; L. W. Thompson of Riverdale Mills, Enoree, S. C., continuing board member; J. P. Carter of Spartan Mills, Startex, S. C., continuing board member; Edwin M. Holt of Cone Mills Corp., Greensboro, past president; and Rodger Hughes of Reeves Bros. Inc., Spartanburg, new board member. (Note: Jack Kissiah of TEXTILE BULLETIN, assistant secretary-treasurer of the S.T.A., was called on to do the camera work, but wasn't adroit enough to get in the photograph.)

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Machine Works, Inc.

GASTONIA, NORTH CAROLINA

procuring and staging the Friday evening floor show. A list of those firms contributing to the entertainment and prize fund follows.

Abbott Machine Co.; Abington Textile Machinery Works; Adams Inc.; Aldrich Machine Works; American Moistening Co.; American Viscose Corp.; *America's Textile Reporter*; Anheuser-Busch Inc.; Armstrong Cork Co.; Ashworth Bros. Inc.; Atkinson, Haserick & Co.; Atlanta Belting Co.; Atlanta Brush Co.; Bahan Textile Machinery Co.; The Bahnsen Co.; Barber-Colman Co.; Barber Mfg. Co.; Becco Sales Corp.; Blackman-Uhler Co. Inc.; Bowen-Hunter Bobbin Co.; Bryant Electric Repair Co.; The Bullard Clark Co. (E. H. Jacobs Northern and Southern Divisions); H. W. Butterworth & Sons Co.; Carolina Belting Co.; Carolina Loom Reed Co.; Carolina Supply Co.; A. B. Carter Inc.; Clinton Corn Processing Co.; Cocker Machine & Foundry Co.; Corn Products Sales Co.; Crompton & Knowles Loom Works.

Dary Ring Traveler Co.; Dayton Rubber Co.; Dillard Paper Co.; W. D. Dodenhoff Co.; Drake Corp.; Draper Corp.; Duke Power Co.; E. I. du Pont de Nemours & Co. (Finishes Division); E. I. du Pont de Nemours & Co. (Dyes and Chemicals Division); Field Loom Reed Co.; Fields Mfg. Co.; Foster Machine Co.; The Foxboro Co.; Gastonia Belting & Supply Co.; Gastonia Mill Supply Co.; The Gates Rubber Co., Sales Division; General Electric Co., Apparatus Sales Division; The Goodyear Tire and Rubber Co. Inc., Industrial Products Division; Greenville Loom Reed Co.; Greenville Textile Supply Co.; Ira L. Griffin & Sons; Gulf Oil Corp.; Hart Products Co.; Hollister-Moreland Co.; Howard Bros. Mfg. Co.; Huntington & Guerry Electric Co. Inc.

Ideal Industries Inc.; Industrial Suppliers Inc.; Industrial Supply Co.; Jenkins Metal Shops Inc.; Keever Starch Co.; Kluttz Machine & Foundry Co.; H. F. Livermore Corp.; Lockwood, Greene Engineers; Ralph E. Loper Co.; McLeod Leather & Belting Co.; Meadows Mfg. Co.; Moretex Chemical Products Inc.; National Paper Co.; National Ring Traveler Co.; National Starch Products Inc.; New York & New Jersey Lubricant Co.; Frank G. North Co.; Odell Mill Supply Co.; Olney Paint Co.; Parks-Cramer Co.; Penick & Ford Ltd. Inc.; Pure Oil Co.

Ragan Ring Co.; J. E. Rhoads & Sons; Robert & Co. Associates; Roberts Co.; Schachner Leather & Belting Co.; Schmidt Mfg. Co. of South Carolina; Seydel, Woolley & Co.; Shell Oil Co.; Sherwin-Williams Co.; Sinclair Refining Co.; J. E. Sistine Co.; E. E. Smith & Son; Sonoco Products Co.; Southern Belting Co.; The Staley Sales Corp.; The Stanley Works; Stein, Hall & Co.; The Stodghill Co.; Sykes Inc.; Taylor Instrument Companies; The Terrell Machine Co. Inc.; Texize Chemicals Inc.; *Textile Age*; Textile Apron Co.; *Textile Bulletin*; *Textile Industries*; The Textile Shops; Textile Mill Supply Co.; Textile Specialty Co.; *Textile World*; Thackston & Redding Inc.

Universal Winding Co.; U. S. Ring Traveler Co.; Veeder-Root Inc.; Victor Ring Traveler Co.; WAK Industries Inc.; Watson & Desmond; Werner Textile Associates; Westinghouse Electric Corp.; West Point Foundry & Machine Co.; Whitin Machine Works; Whitinsville Spinning Ring Co.; Wrenn Bros.; Yale & Towne Mfg. Co.; Yeomans Textile Machinery Co. Inc.

In closing the convention, W. M. Pittendreigh, the incoming president, announced that the 1957 meeting has been scheduled for June 20-21-22 at the Ocean Forest Hotel, Myrtle Beach, S. C.



Followship and the Open Door

By JAMES A. CHAPMAN JR., Retiring President

Southern Textile Association

THE title "Followship and the Open Door" might be rephrased as "the ability to follow the man up the line and still be big enough to permit our employees to talk to our supervisors without fear of retaliation from us."

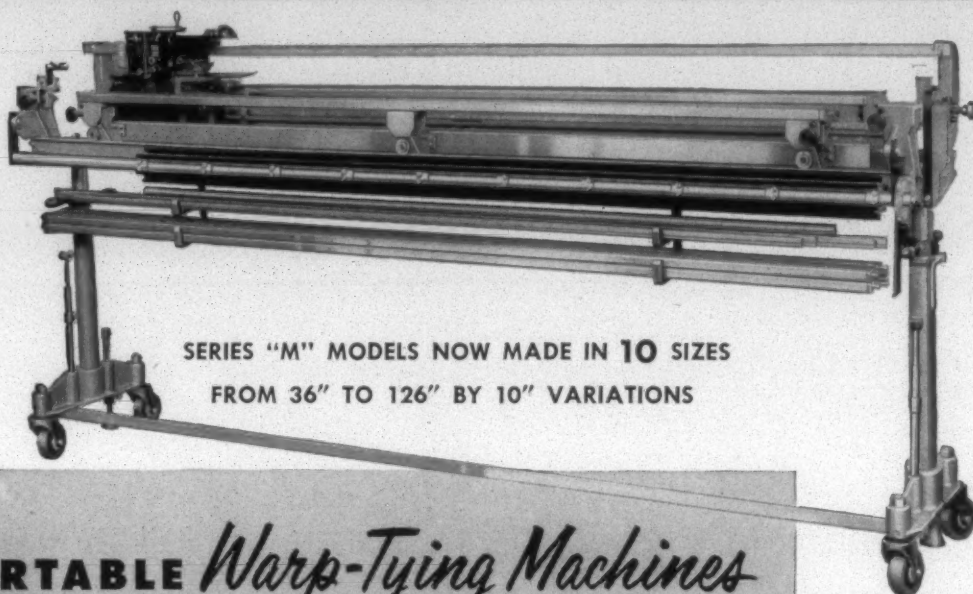
So many times today we hear emphasized to our overseers and superintendents at our different association meetings the need for strong leaders in our industry. But how can we have leaders without followers? And the leaders are very few. In fact, even the top leaders have to follow someone. It may be that the president of a corporation has to follow his stockholders or he has to obey the mandates of his board of directors, and even the board of directors and the stockholders of a corporation have a final boss—

the customer. So we all need to be good followers, and if we are to fulfill the ambition of our association, which is to have "the most expert superintendents and overseers in the textile industry," we must be good followers. I should think, though, that a synonym for followship would be loyalty, because there is no such thing as a good follower who is not loyal.

Elbert Hubbard defines loyalty thusly: "If you work for a man, in heaven's name work for him. Speak well of him and the institution he represents. Remember an ounce of loyalty is worth a pound of cleverness. If you must growl, condemn and eternally find fault, then resign your position; and when you are on the outside damn to your heart's content, but so long as you are a part of the institution do not condemn it. If you do, the first high wind that comes along will blow you away and probably you will never know why."

Dr. Kenneth McFarland, who is considered one of the

BARBER-COLMAN

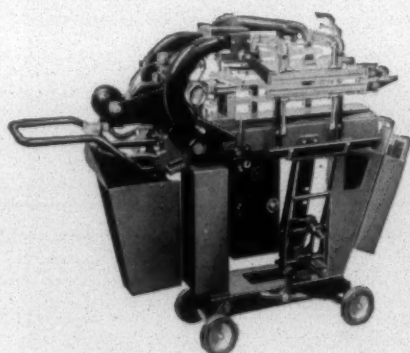
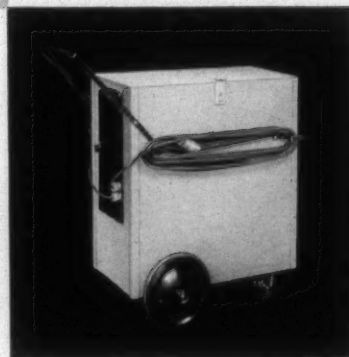


SERIES "M" MODELS NOW MADE IN 10 SIZES
FROM 36" TO 126" BY 10" VARIATIONS

PORTABLE *Warp-Tying Machines* FOR ALL PURPOSES

The BARBER-COLMAN line of warp-tying machines has now been extended to cover practically every conceivable application. As noted above, the Type "M" machines are now available in *ten* sizes. These machines tie the *full width* of the warp in one operation, work directly in back of the loom, and are made in several types to tie-in cotton, spun yarns, filaments, wool, worsteds, or synthetic yarns from a flat sheet or from an end-and-end lease. When using a Type

"M" Warp-Tying Machine, none of the weaving elements need be removed nor any of the loom settings disturbed. The picture at the right shows the special cart used for protecting the Knotter Unit when not in use and for carrying it from one frame to another when two or more are employed. This carrier also contains the variable speed-controller for the Knotter Unit. These machines are probably the most versatile available for most mill conditions.



IMPROVED SERIES "L" MODELS IDEAL FOR CERTAIN CONDITIONS

BARBER-COLMAN Model "L" machines are familiar to two generations or more of mill people, because they have been on the scene in one form or another for 45 years. The latest designs, one of which is shown here, have many up-to-date improvements which distinguish not only their appearance but also their operation and efficiency. These compact, versatile, and easily-moved machines have many important ap-

plications in both large and small mills. Barber-Colman representatives are thoroughly versed in the usefulness and applicability of both Model "L" and Model "M" machines, and can be consulted with confidence as to which might suit a given situation best. Also, it is important to know that all users of Barber-Colman machines are served promptly and skilfully by an alert service group of wide experience.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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Aside from the natural relief of having a completed a hard job, there was some tangible pleasure for Jim Chapman in retiring as president of the Southern Textile Association. In this sequence, Past President Jesse James presents one of the gifts; Martha Chapman gasps as Jim Chapman unwraps the punch bowl, while Jim McAden (who knew what it was), observes; the second gift, as finally figured out by the Chapmans, was a silver lazy susan.

outstanding speakers on human relations in the United States today, says that 91.3 per cent of the people who get fired are canned for reasons that have nothing to do with job know-how, and that disloyalty is the single greatest cause.

It has been said that "in a person's relations on his job, loyalty is no more than doing what he is paid to do. When he accepts a job with a company he accepts certain basic responsibilities. Whether or not they are specifically mentioned (and they almost never are because every human being accepting any job is expected to have such qualities) responsibilities automatically accepted include such things as (1) to do the assigned amount and quality of work; (2) to get along with people (below, level with and above him); (3) to actively and cheerfully support the policies by which the company operates; (4) to do nothing that will harm directly or indirectly the company, the business, or the team of which he is willingly becoming a part.

"Among textile workers and supervisors our observation has been that the most frequent disloyalty is toward the boss, particularly the immediate boss. There probably is not a foreman, second hand, overseer or superintendent who has not at sometime had someone under him 'go over his head' about something. It is likely that very few have not had someone on the level with him 'report' him for something. It is, also, likely that few have not, at sometime or other in their working careers, tried to slip the knife into somebody else. Very often the immediate cause is a mixture of misdirected ambition and thwarted feeling of importance. The boss is simply in the way to our own fulfillment and something has to be done about it—and up pops disloyalty and perhaps another dismissal to add to the statistics."

I think that we should remember in our dealings with our fellow overseers or our fellow superintendents or managers that it is very important to stay within the confines of our job. Now this does not mean that if the president of the company comes around that we are to say nothing to him. If he asks us questions about the job we are

not supposed to just gloss it over and say everything's lovely. If he wants to know why so and so is not running just as it should, or why the ends down are a little higher this week, we should give him our real opinion, not try to blame it on the card room or to say that that card room overseer down there won't put any more twist in the roving. Try to tell him honestly what we think is the reason that a particular process is not performing as it should. That is what he wants. He doesn't want us criticizing the man next up the line. This does not mean to say, however, that we should get upset if one of our employees should go over our heads to the president of the company about a grievance he may have.

When an individual becomes part of management, when he crosses the line from loom fixer or section man to a second hand or assistant overseer, he must follow with



The new president, Bill Pittendreigh, is escorted to the rostrum by Tom Stafford and Joe Delany, themselves past presidents. Walter Vincent, newly-elected second vice-president, and Horace Pennington, who was named first vice-president, may also be seen in this picture.



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loyalty and teamwork and stay within the line of authority. Now, some companies have very strong, tightly controlled grievance procedures, where an employee is supposed to first take a grievance up with a second hand and if he is not satisfied he is next supposed to take his grievance up with his overseer; then he is supposed to take it up with his superintendent and so on up the line to the president. Very few employees ever get to the president because the grievance is properly settled down the line somewhere. And, of course, in a union mill these grievances are usually handled by the shop committee and they usually go right on up the line because shop committees have a way of being most unreasonable. I think it is a very good idea for a company to create the atmosphere and attitude among its supervisors that no matter what the employee goes over their head about, that this supervisor should not get angry and upset about it.

This leads us to the second point I would like to emphasize. The open door policy all the way up the line will certainly pay dividends in employee relations, especially if the men up the line will listen to the employee, then send the employee back to the proper place in the line of authority and have it settled down there. The executive whom the employee has seen should follow the situation to make sure it has been settled. It goes without saying that if one of us tells an employee that a grievance will be handled and, then it is not, then his confidence in management is undermined. Of course, nothing pulls the rug out from under a second hand more than to have a superintendent or vice-president settle something or tell him to do something in front of an employee when he could actually, with proper guidance, very easily settle this problem himself.

One of the toughest situations of this nature that we ever had was when a second hand fired an employee. The employee came to the vice-president in charge of production and told him his side of this discharge. The vice-president said he would look into it. Now when all the facts were

in it was found that the second hand was 100 per cent wrong. The problem was how to right this wrong without upsetting the whole organization. If the second hand had been told that top management had decided to put this employee back to work we may as well have looked for a new second hand because he would have been looking for a new job just as soon as he could get one. The overseer discussed this discharge with the second hand to such an extent that the second hand saw where he was wrong. The next time the discharged employee came around, it was suggested he go back and talk to the second hand. He said this would do no good because the second hand really meant it when he fired him. But he was finally prevailed upon to talk to the second hand and they patched things up and the second hand reinstated the employee. You can see the great importance of preserving the dignity of your supervisors.

Now the open door policy, the fact that the door all the way up the line of management is open, that the top manager or president of an organization is willing to see any of the employees about anything, is all that is really necessary. You would be amazed that as long as the employees know that door is open and available to them how seldom they will use it, and you will also find that they won't be paying some outside organization to come open those doors for them when you have the open door policy.

Some of you may think that there is a double standard when I stated that good followers, good supervisors, should stay within the line of authority, yet should allow the people working for them to step out of these lines without fear of retaliation. Well, there is a double standard and we might as well face it. The supervisor should stay in line and yet let the employee step out of the line of authority as we have discussed here briefly. It is not an easy thing to do, but if handled properly will pay handsome human relations dividends and will not undermine anyone's authority.



Research in the Small Mill

By WILLIAM A. NEWELL, Research Co-ordinator

School of Textiles, North Carolina State College, Raleigh

NOT long ago, a Midwestern newspaper ran a survey among school children to get their impressions of scientists. One little girl, who apparently had been reading too many comic books, replied that a scientist is a nasty little man with a beard and a white coat who works in a corner and does mean things. Many other answers given were not far from this one.

Were I to ask this audience to define a textile research

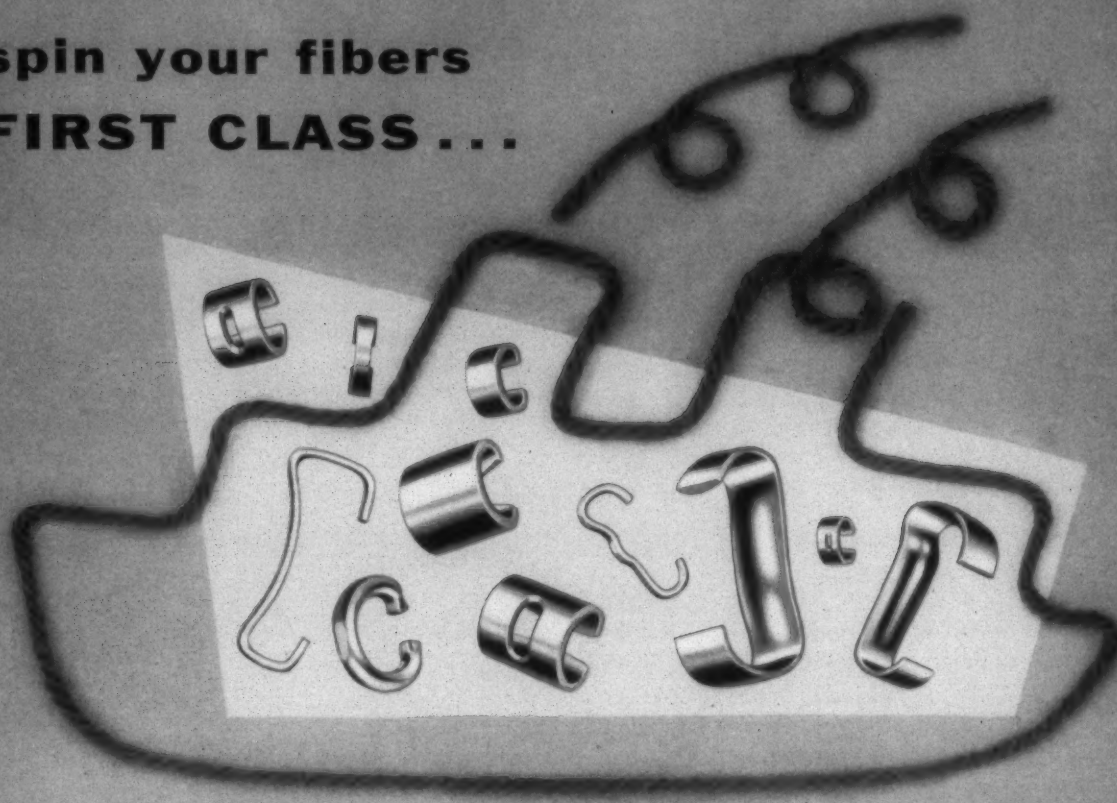
technologist or scientist, I venture to say I'd get a few similar answers—a man with a white coat who works in a laboratory peering through a microscope and who talks in unintelligible language—especially when he talks about textiles.

To some extent this may be true, and if research is not readily accepted in the textile industry, researchers themselves cannot escape some of the blame for not getting their message across. It is the message of research that I should like to discuss, stripped of all of the fancy trimmings that obscure its value to the small textile mill.

For one answer as to why textile mills should be inter-

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ested in research, let's take a brief look at the state of industrial research, the state of textiles, and the state of textile research.

Industrial expenditures on research in the United States in 1956 will add up to an estimated 5.5 billion dollars. To bring that down to size, that's an amount nearly double the gross sales of all textile firms in North Carolina. It is about one-third the total value of all textile products in the U. S. In short, industrial research has become one-third as big as the entire textile industry, and industrial expenditures on research are nearly as great as the gross value of all industrial products of the State of North Carolina. By 1959, *Business Week* predicts, expenditures on industrial research will increase by another 50 per cent.

In the textile industry, however, we have a different story. While all industry in the U. S. spends an average of two per cent of its sales volume on research, the textile industry spends an estimated one-tenth of one per cent. The Du Pont Co. alone is spending twice as much on fiber research alone as the entire textile industry spends on any kind of research.

While this has been going on, what consumers spend on textiles has dropped, since 1930, from 12 cents in every dollar to about seven cents, in spite of the fact that the number of dollars that these consumers have to spend has gone up 350 per cent. Consumer dollars are being attracted

Present Outlook



Erle Cocke

Erle Cocke Jr., vice-president of Delta Air Lines and a former national commander of the American Legion, told the S.T.A. convention at Blowing Rock that the South, once termed the nation's number one economic problem, is today the nation's number one economic opportunity. "Commercial air transportation has paced Dixie's amazing progress in the past decade and will contribute importantly to its continued growth," he pointed out. "Good scheduled air transportation has accelerated industrial expansion in our region and has been a factor in the Southward shift of industry." Jet air power in the future, he said, will bring about "a golden age of industrial progress for the South."

Fitting air power into the national picture, he expressed the opinion that this country's commercial air transport industry is the key to America's security. "Only the awesome retaliatory power of the United States has deterred Russia from further military adventures," he declared. He warned, however, that a greatly expanded research and development program is imperative if the U. S. is to maintain its qualitative lead in supersonic military aircraft and guided missiles. "We must not be misled," he warned, "by announcements of cuts in the Soviet armed forces. The Russians are merely changing the guard, shifting their manpower from army tunics to factory clothes. They are not cutting down on jet plane production, nor dismantling any atomic reactors. These things, more than Red Army riflemen, will be important in any future air-atomic battle."

The Labor Movement



Frank Constangy

"Current Developments and Problems in Labor Relations in the Southern Textile Industry" was the subject of the paper delivered at the S.T.A. convention by Frank Constangy, attorney, Atlanta, Ga. Viewing the major membership drive being set up by national labor leaders, he said the first stage of the campaign will consist of (1) magnifying grievances; (2) slandering owners and management; and (3) convincing the workers that they are being oppressed. The second stage, he noted, will be to build a myth of union invincibility and to create consternation and a weakness of minds. The campaign, he warned, is already under way at some plants, and some 75 to 100 new organizers, believed to be mostly Southerners, are currently being trained to carry out the big push.

What managers and management must keep in mind, he pointed out, is that in labor relations, people are important. The individual worker must be treated with respect and dignity, and he must be given recognition for his services. Union propaganda must be combatted with common sense. The employee's mind must be conditioned by publications, letters, posters, etc., so that when the day comes when union organizers meet him at the gate with circulars and call on him at his home, he will ask himself to choose between the union or "us"—not between the union and "me." In short, management must wage its own campaign, keeping in mind that it is leading the fight for those workers who do not want to join the union ranks.

by new and improved products of other industries—products, when you stop and think of it, that are developed in the research laboratory and cleverly merchandised.

Research, of course, cannot provide all the answers to the problems of the textile industry. Other industries, however, have recognized that research provides a means of insuring their economic destiny. The direct relationship between expenditures on research and broadened markets for products is undeniable.

Because of its low expenditures on research, the textile industry is lagging behind in the technological race. Chemical firms that are willing to spend as high as seven per cent of sales on research are striving to develop fabrics that will be extruded, not woven from yarns spun from fibers. They have a long way to go, of course, and face many problems, but the progress wrought by this research effort in the past ten years is amazing.

We must, of course, continue our efforts to produce textiles at lower costs. In this respect, I was told in Switzerland several weeks ago that in ten years the completely automatic mill will be possible. The man who told me this, one whose opinion U. S. textile men respect highly, also mentioned that as early as this Fall we could look for new applications of evenness-measuring devices in which the measurement will simultaneously control the operation. Other Swiss machinery manufacturers are working along

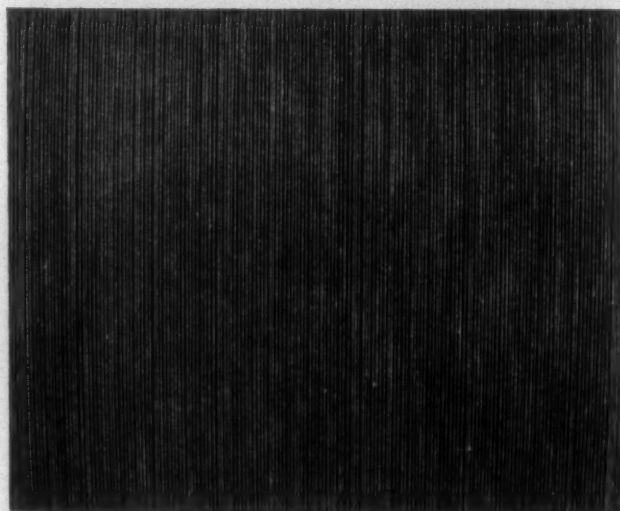
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Golf Tournament

M. E. Seals, Carlton Yarn Mills Inc., Cherryville, N. C., and Louis M. Boulware, U. S. Rubber Co., Winnsboro, S. C., won low gross and low net honors, respectively, in the members division of the S.T.A. golf tournament at Blowing Rock. Mr. Seals shot a one-under-par 69, winning a silver bowl and a leather bag. Mr. Boulware picked up a set of woods for his low net 91-22-69 round.

In associate members' competition, Arlo Martin, Iredell Chemical Co., Stateville, N. C., won low gross with a four-under-par 66. Low net honors went to Ralph Schmidt, Schmidt Mfg. Co., Greenville, S. C., who turned in a 119-53-66 card.

W. S. Terrell, The Terrell Machine Co. Inc., Charlotte, chairman of the golf committee, reported record participation in the 18-hole event, with scores being turned in by 148 participants. Other prize winners were:

MEMBERS DIVISION

J. W. Clark, Clyde Fabrics Inc., Newton, N. C.	Second Low Gross (71)
Alan W. Cone, Cone Mills Corp., Greensboro, N. C.	Second Low Net (70)
Herman Cone, Cone Mills Corp., Greensboro, N. C.	Third Low Gross (75)
T. D. Hollingsworth, Consolidated Textile Corp., Lynchburg Va.	Third Low Net (70)
W. J. Pennington, Cone Mills Corp., Salisbury, N. C.	High Gross (109)
R. M. McCrary, Carolinian Mills Inc., High Shoals, N. C.	Fourth Low Net (70)

ASSOCIATE MEMBERS

Stan Halliday Jr., Draper Corp., Spartanburg, S. C.	Second Low Gross (68)
R. F. Guill, Keever Starch Co., Concord, N. C.	Second Low Net (67)
Gene Ware, Greenville Textile Supply Co., Greenville, S. C.	Third Low Gross (68)
B. Z. Ruff Jr., Draper Corp., Spartanburg, S. C.	Third Low Net (67)
E. J. Colerick, Shell Oil Co., New York, N. Y.	High Gross (128)

similar lines, and we can look for new developments in about two years.

But in addition to reducing costs, we must improve designs, textures and use of colors. We must, in short, spend more time on quality input at the same prices instead of reducing quality input to meet a lower price. Detroit has been doing this successfully for years, to some extent at the expense of the textile industry. Only through keeping ahead on new designs and textures can we stay ahead of the extruded fabric. Only through new designs and textures can we hope to develop in consumers the desire for a larger wardrobe and richer home furnishings that equals their desire for two cars in the garage.

Why does this state of textile research exist? Broadly, the reasons are low profits, the small size of mill units, and the attitudes of those in the industry.

In 1954, textile mills' profits averaged one per cent of sales. When you're only making one per cent, it's pretty hard to spend two per cent on research!

Also, the average mill unit in North Carolina has only 18,000 spindles and 510 looms—a small mill by the usual yardstick and one that cannot afford an elaborate research program.

Finally, textiles is a traditional industry; an industry not born of research as chemicals, electronics and aircraft. Executives in these industries show a far greater degree of consciousness of the function and value of research than textile mill executives.

It is on these two latter points that I should like to spend some time. What is research and what are its functions? What research *can* the small mill do, and what benefits can come out of research in the small mill?

First, let's talk about attitudes. Most of you would probably deny, if asked, that you were a research man. Some of you would probably deny it with the vigor of pleading "not guilty" to a criminal charge.

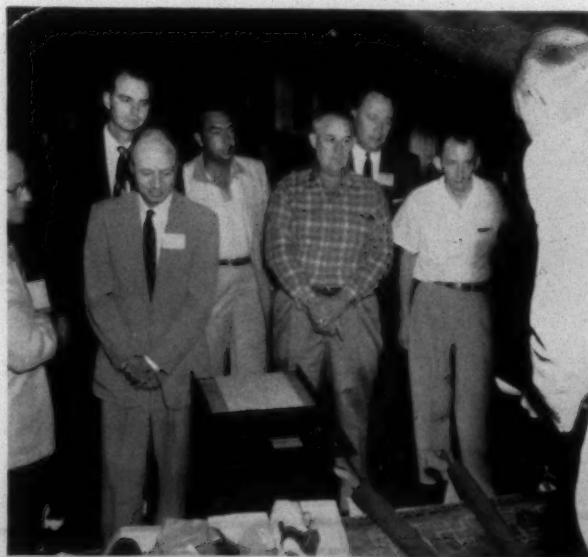
Most of this disassociation with research, I feel, is the result of misunderstanding as to what research really is and how it fits into your job. The fact is that, whether you realize it or not, everyone in this room can, and, in fact does do research. Further you can do research any time or any place, even sitting right here. When your wife studies the grocery ads in the newspapers, even she is doing a type of market research.

What is research? It has been variously defined, but I like two definitions best—one by J. B. Goldberg that research is finding out how to make things better, faster, less expensively, or how to make something new. Another, by Charles Kettering, goes like this: "Research is a state of mind—a friendly, welcoming attitude toward change. Going out to look for change instead of waiting for it to come. Research for practical men is an effort to do things better and not to be caught asleep at the switch. The research state of mind can apply to anything: personal affairs, or any kind of business, big or little. It is the problem-solving mind as contrasted with the let-well-enough-alone-mind. It is the composer mind instead of the fiddler mind. It is the 'tomorrow' mind instead of the 'yesterday' mind."

For small mills and the men in them, it is important to understand that research, as Kettering puts it, is an attitude—a state of mind, because attitudes are inexpensive, and thus small mills can afford them. Further, the greatest potential for conducting research in the small mill lies in development of the latent creative abilities in each of its men.

The research attitude manifests itself in constantly asking "Why?", and in questioning the validity and authority underlying everything you do. Try asking yourself why you do certain things in your mill. The answer, you'll find, in many cases is "because you've always done it that way," or "because someone told you to."

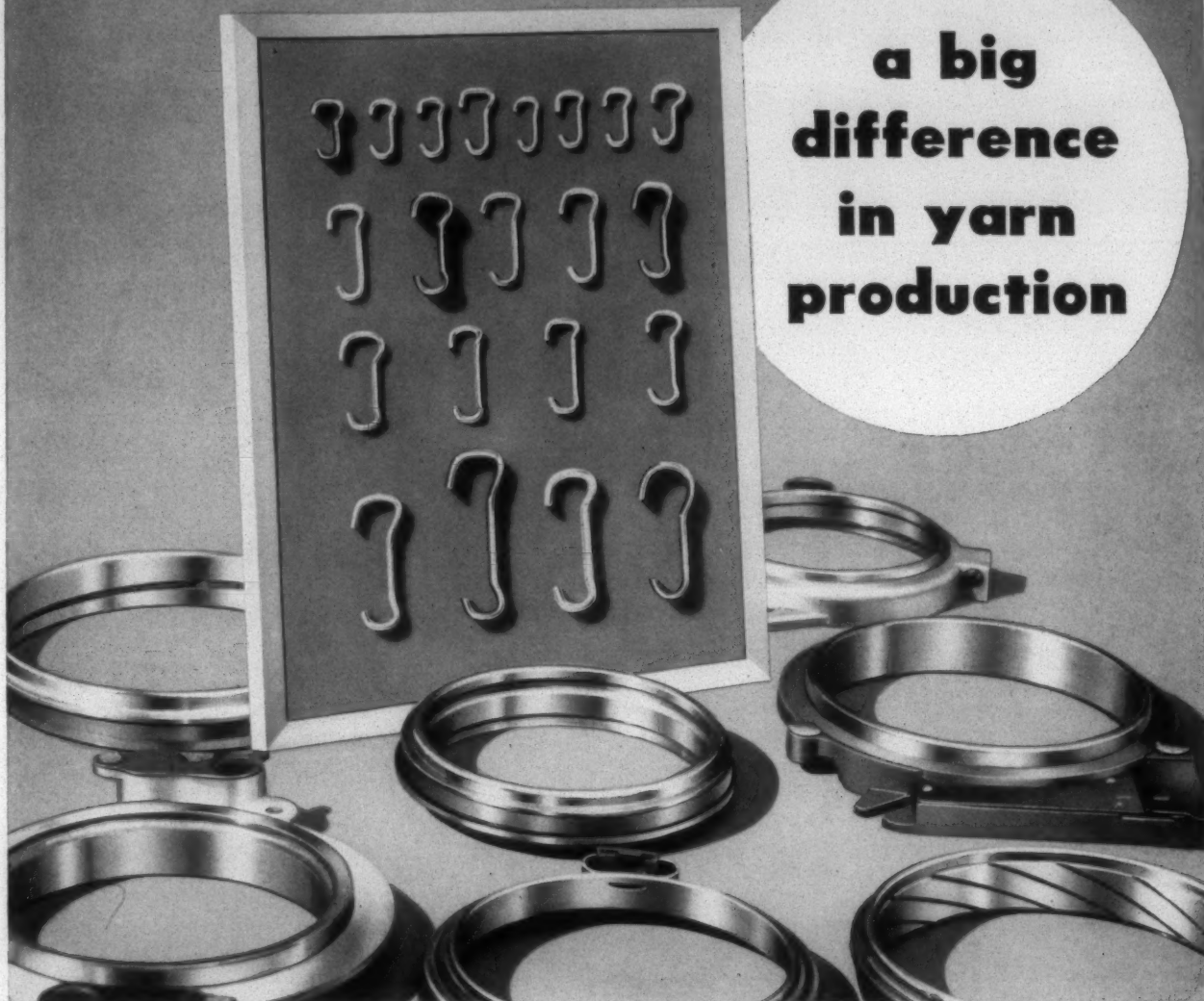
I think that if our research on carding over the past few years has shown nothing else, it has shown that even in the



"A word of prayer" might be the title of this picture, but it simply shows golf tournament winners waiting to collect their loot.

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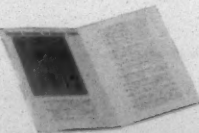
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Associate Members Officers

In an election of officers of the Associate Members Division, Herbert L. Norton, E. I. du Pont de Nemours & Co. Inc., Atlanta, Ga., was named to succeed J. E. Spivey, The Textile Shops, Spartanburg, S. C. as chairman of the council. Elevated from vice-chairman to chairman of the division to succeed Mr. Norton was George Batchelor, Odell Mill Supply Co., Greensboro, N. C. Charles Switzer, Kever Starch Co., Greenville, S. C., was elected vice-chairman to succeed Mr. Batchelor. Junius Smith, TEXTILE BULLETIN, Charlotte, N. C., was re-elected secretary of the division.



George Batchelor



Herbert L. Norton



Charles Switzer



Junius M. Smith

Elected to two-year terms on the Associate Member Council were Walter Coker, Armstrong Cork Co., Greenville, S. C.; L. L. Froneberger, The Bullard Clark Co., Greensboro; I. L. Dowdec, National Starch Products Co., Charlotte; R. W. Butler, Barber-Colman Co., Greenville, S. C.; and G. W. Burkhalter, Gulf Oil Corp., Atlanta. Fred Barrows, Universal Winding Co., Charlotte, was elected to a one-year term on the council to succeed Mr. Switzer, the newly-elected vice-chairman of the division. Serving carry-over terms on the council are M. H. Ridenhour, The Terrell Machine Co., Charlotte; Norman Crowther, Sykes Bros., Charlotte; Donald Marshall, Draper Corp., Spartanburg; and Herman Jones, Saco-Lowell Shops, Atlanta.

year 1956, there's still a lot we can learn about carding cotton.

Take the matter of flat speeds, an analysis of which led to our recent work on waste reduction. Ask a mill man what his production rate is, and he'll tell you so many pounds an hour, depending on the stock he is running and the yarn he is making. Further, he'll defend to the death that considering his stock and the quality required, his card speed is the right one. And it may be. But what about his flat speed? In virtually every case, whether he's running S.G.O. cotton or the finest Egyptian, the flat speed will be a standard three inches a minute or thereabouts. Analysis of this paradox led to new knowledge about the cleaning ability of the card flat, and thousands of cards in this coun-

try and abroad are running today with flat speeds down to nearly one-half inch per minute with accompanying savings in waste.

The research attitude also manifests itself in keeping posted on new ideas and following them up. These new ideas come in many forms—new processing equipment, new auxiliary equipment, new theories, new recommendations on processing or management, and entire new concepts of accomplishing old tasks.

Some larger mills employ men full-time to look for such new ideas, to investigate them in terms of the needs of the mill, and to recommend action. And they find it pays off. If the small mill can't afford to employ such a man, it can keep up-to-date by having each of its men develop the frame of mind of looking for these new ideas and investigating them.

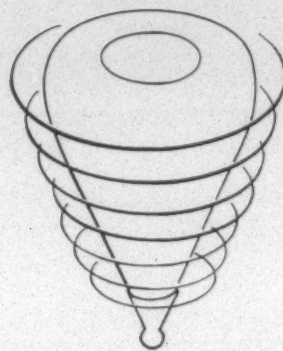
The research attitude manifests itself in conducting experiments, trials and in follow-through. In this area, we find a critical situation exists in the small mills. These mills, in many cases, do not have people capable of undertaking an experiment as simple as determining if one set of cards is producing less waste than another set. When such experiments are run, few if any records are kept, thus making impossible analysis of the data to find the faults in the processing.

At North Carolina State, this situation has led us to develop what we refer to as our income tax form for mill evaluation of our card-waste-reduction recommendations. These forms are based on the theory that if we were handed only a copy of the income tax law, we would have a hard time making out our income tax. So, instead, Uncle Sam sends us all a set of sheets that tell us to put this amount on line 1, another on line 2, subtract line 2 from 1, and so on, until we have determined our tax without detailed knowledge of the tax law. So it is with the waste-experiment forms—enter this and that figure, add, subtract, multiply and divide as directed, and when you're finished you will know the amount of waste saved, if any, its value in dollars and cents on an annual basis, the effect on yarn quality, and the time required for a return of the investment in the modifications required.

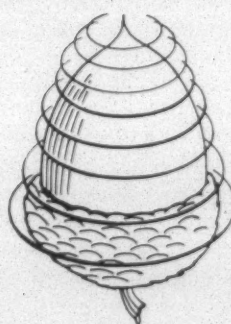
This brings up another aspect of a research attitude. Small mill people should try to appreciate more fully the value of small increments. One mill man who had made limited experiments with our waste-reduction recommendations told us he only saved half a per cent, so he put the cards back the way they were. One-half of a per cent of waste in this mill, however, added up to \$39,500 worth of cotton annually—but he hadn't thought of it that way.

Another way in which research falls down in small mills (and even big ones) is in follow-up on experiments. Mill men try new ideas but nothing is ever reported. In other cases, reports are sent up to the front office that indicate the positive value of the idea, and nothing happens. One mill I could name decided to try a new type of card clothing, which was installed by the manufacturer. Several months later when he called back at the mill to see how things were going, it took quite a while to find on which card the clothing was installed.

This brings us to management's function in research. Over the past few years, as most of you know, we have turned out, for better or worse, a considerable number of new ideas on carding cotton. In following up on mill applications of these ideas, we ran into the same inconsistency



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that you get in an S.T.A. meeting when opinions are expressed on virtually any new piece of equipment. Some mills eat the new ideas with a spoon; others throw them out as useless.

Some of this inconsistency is bound to exist, because of the wide variety of mills and men producing a wide variety of materials. Few new ideas will work well for everyone.

In the area of our carding recommendations, however, there were inconsistent results among similar mills. Investigation led to several conclusions—some mills had given up too easily, some mills had not employed all the recommendations, and some had taken the recommended speeds and settings too literally. Instead of applying principles, they had applied numbers, and they didn't always fit.

One mill in Alabama, however, had a perfect score. It seemed that whatever we told them to do worked like a charm. So we went to this mill to find out the secret of their success—and we found out. The secret was that this mill's general manager had made it his personal responsibility to see that our ideas and others were sought after, thoroughly evaluated, and followed through on if successful. Every report we sent this mill was reproduced in over 60 copies and sent to everyone in the mill concerned with carding. Further, they were sent with a covering memorandum pointing out that the mill was paying hard cash for these reports and they should be studied and the recommendations tried. This manager had no separate department on which he sloughed off the responsibility for research. His mill was his research department, and because his attitude had permeated every department—every superintendent, overseer, and even fixer was a research man—constantly stimulated and constantly striving to do things better. The initiative and competitive spirit thus generated was providing remarkable results. This man stated what we have often said about our own research or any other research—that its principal value is not in finding that this speed or that setting works better, but rather in causing his men to realize and do their

jobs on the principle that there is always a better way, and to strive constantly to find it.

So, perhaps the first and best move that a small mill can make to undertake research, and the least expensive as well, is simply to develop the research potential in all of its men by developing sound research attitudes. This isn't done by issuing a memorandum. The research outlook comes from training and encouragement. It comes from developing a questioning attitude, from willingness and freedom to experiment, from careful design and carrying out of experiments. Most important, it comes from the top. The results must be carefully followed and studied, and the application of successful work over a broad front must be carried through promptly. Too many mills are too busy losing money to save money.

Research never guarantees successful results, and many more failures than successes may be achieved. But you can be sure that research will always prove something, even if it's only that your pet idea won't work. If, on the other hand, it does work, the results will usually be worth many times the effort involved.

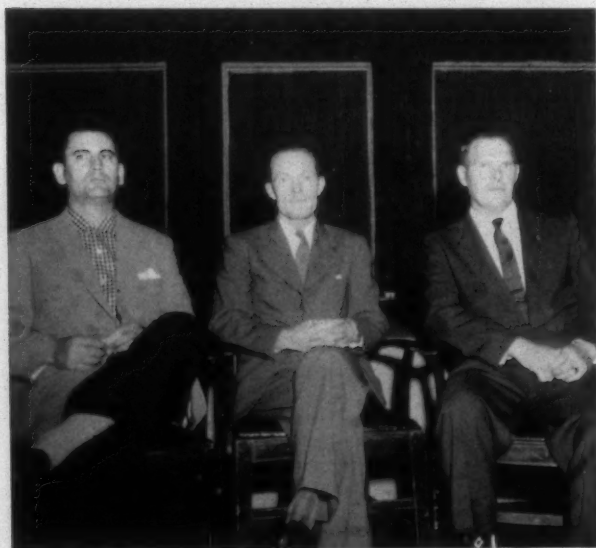
As a second means of carrying out more elaborate studies, a small staff may be assigned to experimenting in a small pilot plant. All of our recommendations for improved carding have come from a small laboratory 20 x 25 feet in size, containing one card, one draw frame, one short roving frame, and a short spinning frame. Considering the value of the results that have come out of the investment involved, it remains a mystery to us why more mill don't do the same thing. I might add here that Swiss mills, which spend about ten per cent of sales on research, or ten times the amount U. S. mills spend, do a great deal of this pilot plant work on their own problems. A machinery manufacturer couldn't tell me what speeds and settings most mills use in carding, because each has developed its own to suit its needs.

Another means of applying research is to call on the assistance available to you. The School of Textiles at North Carolina State College, in addition to its facilities in Raleigh, now maintains a field service office at the N. C. Vocational Textile School in Belmont, operated by Ralph Barnard, formerly of Burlington Mills and now with our department. His sole job these days is to call on mills to assist them in applying research results. This service is available at no cost, and is part of the program of N. C. State College to pay dividends on the taxpayer's investment in higher education. Mr. Barnard can also occasionally be persuaded to cross state lines, at no cost, as we feel that whatever helps the textile industry anywhere helps N. C. State. Still another source of help is the cotton utilization extension specialist, William J. Martin, maintained by the U.S.D.A. with headquarters at the School of Textiles, Clemson College, to assist in application of research results.

Research is useless unless it is used, and these men stand ready to assist you in making use of the vast amount of existing research results backed up in the pipelines.

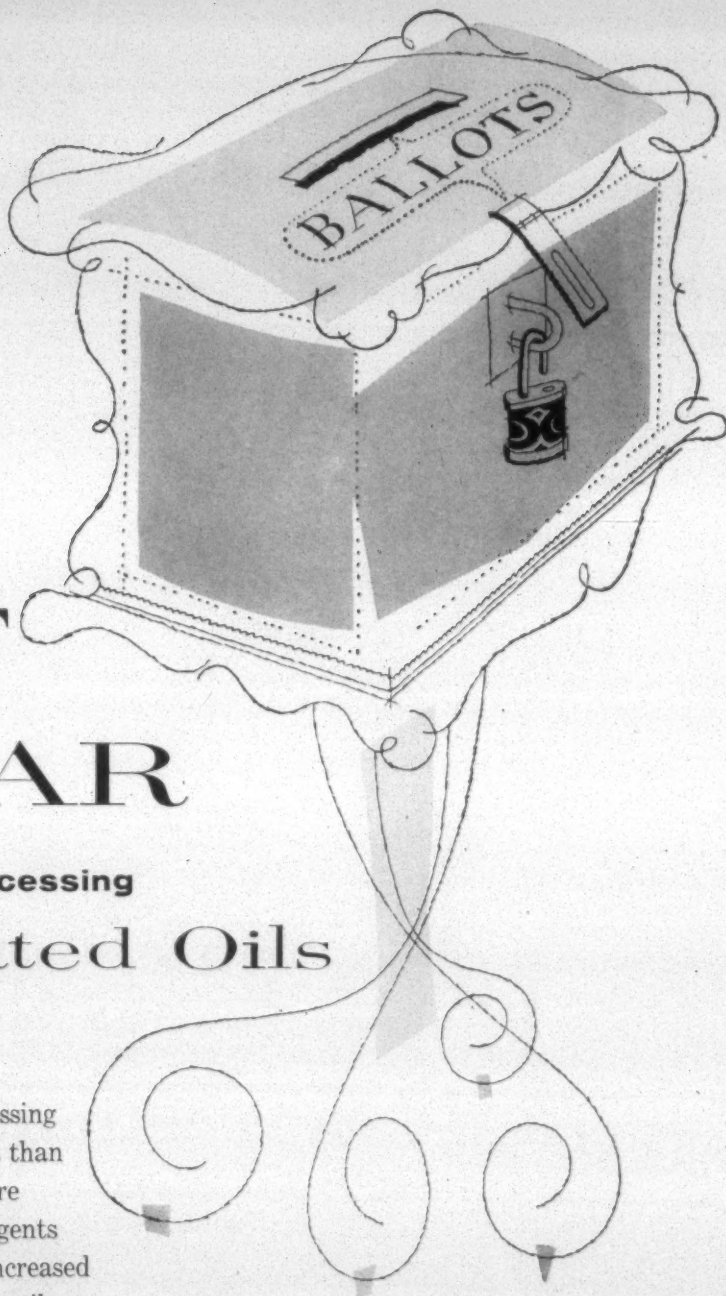
Still another means of conducting research is to have it done for you—especially work on long-range problems for which many mills have neither time, adequate money or equipment. Every textile school in the U. S. has a research group of one type or another, and at N. C. State we have the largest independent textile research group in the world.

One of our methods of accomplishing long-range research in cotton processing that might well be adopted in other



Hughes, Crawford, Brackett

New members of the board of governors of the Southern Textile Association are Rodger Hughes of Reeves Bros. Inc., Spartanburg, S. C.; L. A. Crawford of Joanna (S. C.) Cotton Mills; and M. L. Brackett of Highland Park Mfg. Co., Charlotte, N. C. Not available for this picture were J. C. Farmer of Henderson (N. C.) Cotton Mills and Jesse Boyce of Erwin Mills Inc., Durham, N. C. Re-elected for a three-year term was David H. Roberts of Lydia Cotton Mills, Clinton, S. C.



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areas is to develop new ideas that appear to deserve long-range study, usually for about a year. In one recent case, the project designed was to cost \$38,500. We went to ten mills, and were successful in getting \$3,850 from each, 52 per cent of which cost is deductible, in exchange for working with the mill's cotton and providing confidential results for one year before making them public. In this way, research can be done co-operatively by a group of mills at a net cost to each of less than five per cent of the total cost involved.

That these co-operative projects have been a sound investment is beyond question, and they provide an example of the potential returns from research of any kind. In our project on waste reduction in carding, an investment by three of six mills totalling just over \$15,000 yielded a return to these three mills of \$470,000 in one year, a 31-to-1 return. Since results of this work have been made public and demonstrated, scores of North Carolina mills have reduced card waste significantly with no loss in quality. I might add here that mills abroad, as in Sweden, seem to accept and apply the results of this study more readily than U. S. mills. Other mills, using this waste study and previous work completed, have saved thousands by raising card production rather than to buy additional equipment.

Still another and less costly way of providing research benefits to your mill, especially if you're in North Carolina, is to support actively this Fall and next Spring the requests of the School of Textiles on the coming legislature for a new building for textile research and for an annual appropriation of \$100,000 for textile research. The volume of research being done at Raleigh and the quarter of a million dollars worth of equipment the department has bought in the past few years to benefit education as well as research are literally bulging the walls of our building. If the mills wish to see this work continued, they *must actively* support our request for about \$750,000, or the equivalent of our budget for only 1.5 years, for a new building.

I might point out here that textiles is by far the largest economic activity in North Carolina—with a value of products three times that of agriculture and 70 times that of mineral products. Yet, annual state appropriations for agricultural research total \$1.2 millions, for mineral research, \$90,000, while state appropriations for textile research are only \$8,098. In South Carolina, the situation is quite similar.

In the light of the importance of textile manufacturing to the Carolinas, and in view of the limitations on the mills in maintaining a major research program of their own, it would seem appropriate that the states make some effort to provide research support for their largest industries. I might add that after seeing the degree of government support for textile research in Europe, we should have asked for \$1 million annually instead of \$100,000.

We plan a highly organized effort to secure these appropriations, and when we notify you that the time has come for you to help, we hope we can count on your active support as individuals, mills and the S.T.A. as an organization.

The type of research that I have been discussing and that most mills and schools do is termed applied research—research on existing processes and materials with a view to immediate application. The solution of applied research problems draws heavily upon our fundamental knowledge of the physical and chemical behavior of materials—knowl-



Coker, Chapman, Constangy, Newell

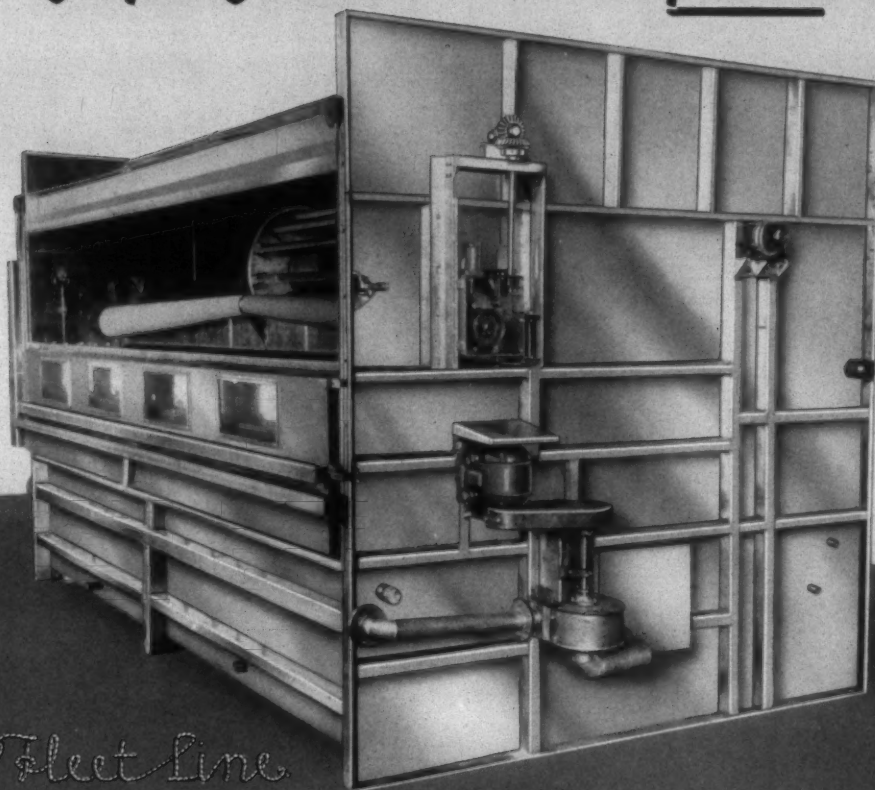
Pictured at the first business session of the S.T.A. convention were the president of the association, James A. Chapman Jr., and three speakers, Erle Coker Jr., Frank Constangy and William A. Newell.

edge developed in what is termed fundamental research, or research conducted primarily to develop new knowledge, with no immediate use in mind. When someone discovered that water freezes at 32° F., he was discovering fundamental knowledge that has since been applied broadly. Fundamental knowledge in any field and *especially* in textiles, is far from exhausted. And it is on the discovery of new fundamental knowledge that future progress, even for the textile industry, rests. For this reason, my final recommendation for research in the small mill is that the mill support the fundamental textile research being conducted by Textile Research Institute in Princeton, N. J., or the Institute of Textile Technology at Charlottesville, Va. The cost is low and in proportion to mill size, every mill should invest in its own future through these efforts to discover new fundamental knowledge of textile materials and their behavior.

Perhaps I should pause here, lest I have been too hard on our mills, to state that some mills, including some small ones, are doing an excellent research job. One of the most thorough and controlled evaluations of our recommendations for waste reduction in carding was done by an 18,000-spindle mill just down the road from here—one that concluded that the ideas were worth adopting and would pay for themselves in six months. Other mills represented here are alert and progressive when it comes to trying new ideas. But it is still unfortunate that when we ask mills if they have tried recommendations of our various reports on processing, one-third reply "What report?", and another third haven't gotten around to it. It is also unfortunate that the motivation for setting up fiber-testing laboratories in many mills is not to develop broader knowledge of the fiber and its behavior, but as a defense against getting the dregs of the cotton crop.

Textile manufacturing today is a rapidly moving business, in spite of its lack of emphasis on research. It is sometimes quite a shock to our students at State College when we warn them that most of what they have learned will be obsolete in five years, and it will be. In spite of trends toward centralization of management control, the small mill units are still the bricks from which the entire

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structure of this industry is built. For this industry to prosper and hold its own in the industrial race, it must lean less heavily on its suppliers to do its research and provide

its progress. The small mill must develop research in its own area of processing, and adopt the attitude of the aircraft industry where the saying is—"If it works, it's obsolete."



Challenge to American Textiles

By F. E. GRIER, President

American Cotton Manufacturers Institute

OUR industry faces many challenges. I am sure you can think of a number of urgent problems. One is the need to keep pace with the activity and earnings of American industry in general. We ought to be expanding and modernizing at a faster rate.

Research offers all kinds of challenges. Our progress since World War II has been quite remarkable, but we have only scratched the surface. There's a world of new things to be opened by the keys of science. That brings up still another challenge—the shortage of scientifically trained manpower, technicians who know how to turn the keys. Then again, we have the continuing battle to compete for our fair share of the consumer's dollar against the vast array of non-textile goods and services that entice the American public. We must develop new marketing and distributional resources; there is a need to apply principals of psychology and human science to the selling job.

Please understand that I do not underrate our industry's many accomplishments. We play a vital part in the national economy. You and I have every right to be proud to work in an industry which supplies people with goods essential for life itself, from the day a person is born until his last breath is gone. No other textile industry anywhere has been able to produce the volume and range of goods that ours is doing—to meet the people's needs at prices which, relative to wages and manufacturing costs, are the lowest in the world.

However, in order to keep up this magnificent job and to tackle all the problems that face us, one thing above all else is essential . . . faith in the future. Confidence is needed, confidence that today's planning for tomorrow, that today's investment in money and hard work for the future, will bring a fair return. Any industry which runs out of that commodity can't help but get in a rut, falter and slow down.

You, I and everyone whose work is tied up closely with textiles would certainly dread to see that kind of paralysis spread through the textile manufacturing business. That is why many leaders of our industry believe the supreme challenge to American textiles is this: to settle, once and for all, the question of unrestricted imports of cloth and apparel from low-wage foreign countries such as Japan.

For years and years, this problem has been a constant threat. It's an old headache, as you well know. In the past, though, the situation was kept reasonably well in hand because of the textile protective tariff and the U. S. industry's tremendous productive superiority. Today, the situation is drastic, to put it mildly, because of an entirely different set of circumstances.

For one thing, the productive edge we once had has practically disappeared. Japan and other Asiatic countries have mills equipped with western-type machinery, operated by people earning oriental wage rates ten times under the U. S. average textile wage. They are buying cotton at world prices, substantially lower than prices American mills must pay.

Against that kind of set-up an industry like ours—geared to American wages and costs—is defenseless when it comes to meeting the competition here in our own home markets. Think of it: to meet Japan's competition on equal terms, you would have to step up your output not double, or triple, but ten times!

For another thing, the American industry's tariff protection has been all but wiped out. This was done last year by the General Agreement on Tariffs and Trade, or G.A.T.T. That happened just when Congress was passing H. R. 1, the trade act, in a strengthened form—after so many people in our industry appealed to senators and representatives to put textile safeguards into the law. That big tariff cut happened just when the White House was promising that nothing would be done to G.A.T.T. to jeopardize American textile jobs.

The third factor is the foreign economic policy being followed by our Government. I refer to the policy of forever giving and conceding and getting little or nothing in return. In terms of grants, credits and loans this has amounted to more than 54 billion dollars. Since 1945, outright gifts of American Government money to Japan alone have totaled 2½ billion dollars, to say nothing of the millions more in credits and loans.

A counterpart of this outright giving is the more insidious program of aid through trade, or giveaway trade—the policy of trading off our jobs and resources to the lowest bidder.

You and I recognize, of course, that the United States must bolster up the Free World. Aid programs are necessary and must continue. Nobody wants to see Japan or any other country slip into the Soviet orbit for economic

reasons or any other reason. Moreover, neither America as a nation nor textile manufacturing as an industry can afford to take an isolationist position. We have huge potentials in international trade and certainly want to see it expanded.

My point is, we want to see this done sensibly, in the spirit of true give and take, and with reasonable safeguards for any domestic industry whose situation makes it vulnerable to attack from low-wage foreign competitors. The time is overdue when the American people, and especially we in textiles, should insist on sanity and common sense in federal economic policy.

I need not tell you that Japanese textiles have been pouring into the United States at record breaking rates. As a percentage of the total output of our industry, these imports may look small to some people. When you take a closer look, however, you notice that they are concentrated in a wedge-shaped pattern aimed at key segments of our production.

For instance, the targeting of velveteens was so heavy that now Japan is supplying 70 per cent of the domestic American market for that fabric. Then, overnight, a sudden shift was made to gingham. This particular invasion is still on. And so the story goes, with towels, sheets and pillowcases, table damasks, cotton shirts and blouses and similar items.

The damaging effects of this kind of pin-pointing of shipments are hard even for experienced textile people to measure. I recently heard of a big mill that has more than a third of its gingham looms idle. The management, being resourceful and unwilling to lay off employees, is shifting into other lines of production; and that means, of course, tougher competition for other mills in the industry which are producing those lines. So you see, the impact of imports targeted at one area spreads trouble throughout the whole industry. This has been happening repeatedly, and will keep up until an authority greater than we command—and I mean the Government—sees fit to do something about it.

Up to now, I regret to say, those in Washington who were charged by their oath of office to defend the interests of loyal American citizens, have shown a pathetic and tragic inability to do anything. Just recently the U. S. Tariff Commission informed the Senate Finance Committee that it would be impossible to make an item-by-item study of textile imports, the excuse being that there are too many categories.

Some particularly hard-hit segments of the industry had nevertheless appealed to the Tariff Commission for relief, and they were told to come back in six or eight months or so, for hearings. Normally, according to the actual records, these relief investigations take several more months, after the hearings begin—and even then, there is no requirement that the findings and recommendations be carried out.

You can see, then, that while uncontrolled imports from abroad are causing stagnation and the threat of slow death to our industry, the administrative agencies of the government are either helpless, or unwilling, to take corrective steps. For a year and more, top leaders of the industry have been traveling to Washington almost constantly, trying to get some kind of positive action by the Administration. There have been series of conferences—but all they have amounted to was expressions of sympathy and empty promises. You'll see what I mean as I describe our latest experience.

As you know, the import crisis had reached such runaway

proportions late last year that the Japanese themselves decided to put on the brakes. They did what our own Government should have done, and acted to set limits on shipments to the United States.

While we can give them the credit of moving in the right direction, a one-sided decision of that kind left it to the Japanese alone to determine the make-up of the quota, what kinds of goods would be shipped, the length of time it would stay in effect, and so on. Moreover, the details were very flimsy—simply a total of 150 million yards of cotton fabrics partially broken down to two items, 20,000,000 yards of print cloth and 5,000,000 yards of velveteen—plus a total of 2,500,000 dozen cotton blouses.

Apparently some of our Government people wondered if this were the sum total of the Japanese export quota. There were rumors that representatives of the U. S. and Japanese governments might be discussing it and that perhaps our Washington officials might even have entered into some kind of negotiations with Japan. On May 17 a group of top mill management people were hastily summoned to Washington, as though some momentous announcement was going to be made. Representatives of the State, Commerce and Agriculture Departments handed us a three-point "plan" and I put that word plan in quotes. Here is what it amounted to:

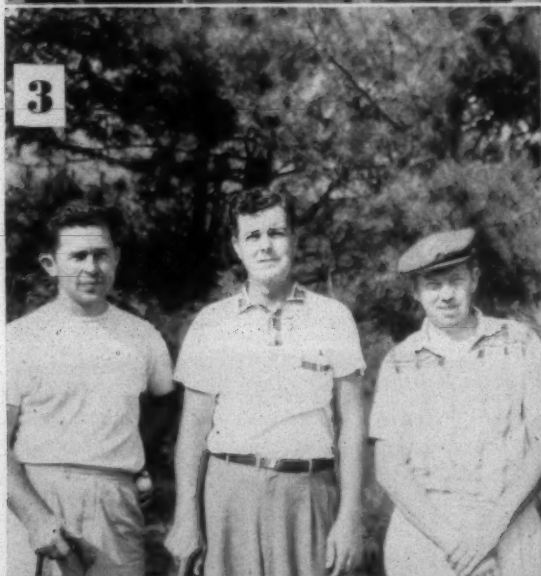
First, our government would ask other countries to relax their restrictions against Japanese imports. Let me say this is what our reciprocal trade program was supposed to be doing right along, so that was nothing new.

Second, we were assured equalization payments on exports of cotton textiles, yarns and spinnable waste to compensate for government exports of raw cotton at world prices, beginning next August. Our comment on this is that such an action would come as a logical consequence of any cotton disposal program; and it has no bearing on the import problem.

Third point in this generous gesture of the Government was that notes between Secretary of State Dulles and the Japanese Ambassador relative to the Japanese export quota would be made public. The Japanese note merely reaffirmed the earlier quota announcement and said nothing about



Bob McCrary, who was in charge of securing and awarding door prizes at the convention business session, got some help in the final drawing from Mrs. Stanley W. Converse Jr., whose husband is with Clifton (S. C.) Mfg. Co.



(1) W. B. Etters, S. J. Adams, Fred Taylor and R. W. Butler. (2) H. H. Pearson, W. R. Peacock and Claude Dunn. (3) Gordon Wood, Roy Camp and Judd Farr. (4) Karl Selden, Melvin Bell, F. E. Bozeman Jr. and Bill Steppe Jr. (5) J. H. McGee, Stewart Blanton and Charlie Holt. (6) T. D. Hollingsworth, Frank Aultice, Rouse Joyner and Dallas Neese. (7) Joe Gilbert, D. A. Purcell, J. C. Farmer, J. M. Proctor and George Batchelor.

S. T. A.



GOLFERS

(1) Paul Gaffney, M. K. Firesheets, Bob Lee and Ray Lassiter. (2) Bernard Wright, R. J. Stripling, Mike Cloniger and Sam Boyd. (3) B. I. Gardner, L. F. Coley, C. E. Moore and Roger Long. (4) Arlo Martin, Oscar Smith, R. C. Reinhardt and J. W. Clark. (5) J. L. Wescott, Ralph F. Schmidt and Harry W. Haynes. (6) C. J. Troutman Jr., Ben Warwick, W. K. Sandefur and Herb Norton. (7) J. P. Carter, William B. Pitts, Welling LaGrone and Gene Johnston.



Tom Stafford (with necktie), who ran the bingo game Friday afternoon at Mayview Manor, helps to determine just who among three players finishing neck-and-neck gets the prize. At right are shown the more than 200 conventioners who preferred bingo to golf.

ginghams, shirts and scores of other goods which are reaching our shores in increasing volumes. The Japanese did state that their quota program would remain in effect through 1957 and if any change were to take place in the limitations, we would be given three months' notice.

In other words, this official correspondence brought forth nothing new except a thin Japanese promise to carry forward the vague quota into 1957, subject to change on three months' notice. Three months, incidentally, is just about the average loading, shipping and unloading time for a cargo of textiles from Osaka to New York.

The net result of this noble move by the State Department was to ask an industry in peril please to put blind trust in its most dangerous competitor. The announcement was made in a manner to reassure everybody that the textile industry need have no further alarm, and as though the import question were now satisfactorily solved.

Secretary Dulles, having given what amounts to an official blessing on the Japanese industry to decide which portions of the American market our U. S. mills are to be privileged to supply, has now washed his hands of the matter. He actually said as much in a recent press conference.

If any textile people have clung to hopes that the State Department and other administrative agencies would make an honest, concrete attempt to curb these unfair and uncontrolled foreign imports, their hopes were dashed by this sorry performance.

While there is yet time, and before the State Department's tie-ups with G.A.T.T. lead ours and other American industries further down the path toward liquidation, it is imperative that the Congress take this matter in hand.

The Congress is the voice of the people. It will respond to the public's appeals if those appeals are loud enough and insistent enough. I urge you, therefore, to think carefully about this supreme challenge facing American textiles, and to make your thoughts known to your representatives and senators. Talk this situation over with your friends and families and associates, and ask them to do likewise.

In my opinion, it is high time the Congress should demand a complete re-evaluation and re-arrangement of the U. S. Government's foreign aid and foreign trade policies. This is the greatest need, and it ought to include positive steps to negotiate foreign trade agreements on a country-by-country, bona fide contract basis.

This would have to be a long-range program. So pending its establishment, at least, we are convinced the Congress should move promptly to establish a system of reasonable,

proportionate and expandable import quota controls on goods from low-wage nations that jeopardize basic home industries such as textiles.

In line with these two important objectives, we believe the Congress should rule against any further entanglements with G.A.T.T. and particularly should vote down the idea of this country's joining the proposed new G.A.T.T. agency, called the Organization for Trade Co-Operation.

Above all, let's hope that actions along these lines by Congress would compel the State Department to come down out of the clouds, practice less deceit and get to work on the job of breaking down the world-wide mesh of exchange controls, exorbitant tariffs, hidden subsidies and similar artificial restrictions that today keep international trade in chains.

If an aggressive foreign policy could open up the regions of want and rags in Asia, Africa, South America, the Near East and the many Pacific territories, and set them free economically, there would be more than enough markets for all the world's textile industries.

That's the kind of foreign policy we need. I, for one, intend to hold to the faith that the American people will demand it in place of the wishy-washy foolishness now being pursued in the name of free trade, charity and international politics.

Once we have met and overcome this greatest challenge, our industry will have a sound footing for progress. We'll know where we stand, and we'll have the incentive to move ahead into greater production, better markets and a brighter era for textiles.

Mercurial and weather-sensitive retail store sales swings and sudden spates of textile imports from abroad so far this year have transformed the steady flow of consumers' soft goods spending into an erratic pulsation of demand at the textile mill level, says the Value Line Investment Survey published by Arnold Bernhard & Co. After three years (1952-54) of depressed business and narrow profit margins, most textile companies experienced a good pick-up in demand during 1955 which was quickly reflected in improved earnings. This year further improvement carried through the first quarter. More recently, however, the textile picture has weakened due to unsettled price conditions aggravated by a surge of imports from Japan. The Value Line expects that the full year will prove a reasonably good one for the leading textile companies.

Opening, Picking, Carding & Spinning

The Mill of Today

By R. Z. WALKER

The last several sections of this series of discussions dealt with the factors affecting drafting. This, the final section of the series which has been appearing for the last four or five years, will deal briefly with the development of the spinning drafting element. Fittingly, this assembly has been left as the closing subject. No other single assembly in the spinning mill has been the target of so much research; and no other unit has had such an impact upon the economies and operation of the mill.

THE entire objective in attempting to improve the spinning drafting unit has been to devise a mechanical means of controlling all of the fibers in a cross-section of the strand during the entire drafting operation. Actually, all of the various units that have been tried are based on attempts to imitate the action of the human hand when used in hand-spinning. Then, the thumb and forefinger controlled the forward pulling of the fibers by either increasing or decreasing the pressure between them, in accordance with the tendency of the yarn to become over or undersize. When the yarn tended to become oversize a tightening of the fingers held more of the fibers back and so reduced the count of the yarn. Inversely, if the yarn seemed to be becoming light then the grip would be relaxed to allow more fibers to slip forward, increasing the yarn weight. All of the fibers, and both ends of the fibers, were held in perfect control until released and locked by twist.

Mechanically, the imitation of the human hand is extremely difficult. From the mechanical standpoint, we are asking components to perform antagonistic functions. Several prime examples of this are seen in the function of the top roll. This roll must grip the fibers securely in a nip between itself and the bottom roll. To do this the roll must be held under considerable pressure. On the other hand, the top roll must turn freely and be driven by the bottom roll. We place a load on the roll, and then drive it by frictional contact, demanding that there be no slippage. Another paradox, the roll must be large enough in diameter to prevent lap-ups and to have sufficient covering to form a cushion and yet, at the same time, the roll must be small enough in diameter to allow settings only slightly over the staple length. A more serious problem of achieving two contradictory purposes will be outlined later, regarding the middle top roll.

The complexity of the drafting assembly is due to the need of satisfying such diametrically opposed qualities. Each component of the assembly must be a carefully designed compromise of just such conditions as those outlined

above. The means which independent groups of technicians have taken to arrive at the same objectives have often been along quite dissimilar paths, toward a common end. The development of long-draft has been marked by a variety of different units having as their purpose the solution to the problems which research, at the time, had indicated were the source of unevenness in drafting.

In tracing the growth of such units, however, another angle must not be neglected. In undertaking a serious and critical study of drafting, one must remember that new theories are continually being derived regarding the behavior of fibers during drafting. The introduction of a new theory of fiber behavior is generally followed by the advent of a new system designed to practice the method of fiber control indicated by the new theory. In some cases the theories are valid but the method of control cannot be utilized because of practical difficulties. In other cases, the new system attains a prominent place in mill applications and installations. In almost all instances a new slant on drafting is added to the fund of knowledge available to the spinning industry and to the machinery manufacturers.

The fact that there is a continual flow of new designs from the research laboratories is not a reflection of the poor designs of the past. On the contrary, our basic designs of drafting elements are in strict accordance with the principles which dictated the first of the long-draft units. Two factors have contributed to a more rapid improvement of drafting mechanisms. First, new testing instruments of extreme delicacy and accuracy have now enabled research workers to evaluate spinning tests more precisely and with much greater detail. Secondly, new materials and new mechanical applications have enabled the product engineer to design components of greater effectiveness.

It is not our intention here to trace out the complete historical flow of design improvements, but merely to outline some of the applications of the more interesting theories of drafting control. Drafting with rolls was invented in 1738. The original patent covering long-draft was brought out in England. This patent was assigned to Philip Chell, a textile engineer of Kensington, in 1823. The basis for his patent was the use of belts to carry forward the fibers.

In 1868 the first long-draft patent in America was assigned to J. B. Fuller of Norwich, Conn. Fuller designed a system based upon his theory that the main block in increasing the draft between two sets of rolls was that all of the fibers in a strand are not of the same length. This fact is now one of the basic fundamentals governing all approaches to fiber control. On the strength of this concept, Fuller developed two systems which would allow long fibers to be drawn forward without breaking, while at the same time the rolls could be set to seize and control the short

fibers. These systems became the base from which all other long-draft systems have been derived.

His first system consisted of a saddle, middle top roll, and a special bearing. This element was adjustable so as to gain control of short cotton fibers. The second patent incorporated an apron to be used with a large bottom roll and was designed to keep fibers under control for a greater portion of their length. This drafting unit was to be used for handling long fibers such as hemp and flax.

From the basic tenet employed in Fuller's first patent, of allowing fiber slippage to prevent breakage, five different mechanical applications were composed. The first, and most common means, was to increase the number of sets of top and bottom drafting rolls. The second method, now utilized very successfully, was to design a special type of intermediate top roll. The third basis for long-draft design was to use a plate as a friction element to retard the floating fibers and so to hold them in their proper position within the strand. Fourth, and not frequently encountered today in spinning, is the serpentine or broken line of roll positioning. In this concept the height of the lines of rolls are staggered, with relation to a horizontal line across the top of the bottom rolls, so as to increase the area of contact around the circumference of the rolls and thus provide greater roll grip. The fifth, and highly successful means, has been to use one or more belts to carry the fibers forward under a fair degree of continuous and constant control.

The entire heart of the modern drafting element is concerned with the middle lines of rolls and not the front and back lines. The back line of top and bottom rolls must have sufficient pressure between them to grip the fibers securely. This grip, or nip, pulls the feed strand into the drafting element at a uniform rate. It also holds the strand so that the first draft, or break draft, will be able to unlock the fibers from the restraint of the twist in the roving and thus present the individual fibers in a loose condition suitable for even drafting.

The front rolls, top and bottom, must also be able to exert a continuous and uniform grip on the fibers. The secure grip at this point provides an even pull on the fibers at the time when they are undergoing the maximum draft. Also, the fibers already drafted must be held firmly, if momentarily, until the twist that is being placed in the strand has a chance to enter that portion of the strand emerging from the rolls and so lock the fibers permanently within the yarn.

Eliminating the front and back lines of rolls, the problem is already becoming simpler in that the critical area has become localized. To simplify further, the bottom rolls serve mainly to carry forward the fibers and to serve as a base when a nip is to be obtained by the top rolls. Essentially, therefore, the success of the drafting element depends upon the design of the top middle rolls, or of the units which take the place of the top rolls.

As with Fuller in 1868, all of the various designs have been aimed toward allowing the longer fibers to be pulled forward without breakage, while still controlling the shorter fibers. It was thought by many engineers that the solution, or at least a partial and practical solution, was to have a lightweight top roll which would strike a balance between the need for a heavy roll to maintain a secure grip and a light roll to permit fiber slippage before causing fiber

breakage. Typical of this was the Washburn wooden roll.

The Washburn roll developed from earlier attempts to use a common roll, but to use the roll without any type of weighting pressure application. The unweighted common top roll was fairly satisfactory except when the draft was extended. When this happened, the mass of fibers became smaller and the weight was proportionately increased to the point that drafting became irregular and caused uneven yarn. The Washburn roll was wooden to provide sufficient diameter without too much weight. The same end was achieved by others, such as the Richard and Hinds roll of 1912, which was of tubular metal.

The English firm, Dobson and Barlow, for a short time employed a middle top roll consisting of an arbor with two loose shells. The two shells were connected to the arbor by a leather covering which extended from one end of the roll to the other. The theory behind this was that pressure could be applied positively to the center arbor to obtain a positive drive, turning the shells at a uniform rate. The shells, on the other hand, would not be held so firmly as to cause fiber breakage but would exercise some restraint.

Other middle rolls of this same period were composed of a series of washers which would pierce the mass of fibers and hold them in place by frictional contact. This roll was not too successful because the fibers soon wound around the spaces between the washers and blocked the passages. Another, and more widely used roll, was a top roll made of soft rubber. This was quite effective as the rubber was soft and would yield to the pressure of the fibers. The main drawback was that the constant kneading of the rubber soon led to a breakdown of its composition.

These efforts led to the birth of the slip roll principle, around 1920 or 1922. The slip roll principle is merely the use of an unweighted small roll. This type of roll could be set close to a standard top roll, well within fiber length, because of the small diameter. The problems in this application center about the driving of the roll and overcoming the deflection caused by the lack of stiffness due to the small diameter. In addition, it is difficult to maintain a uniform surface speed between the small top roll and a larger top roll. The first approach to the solution of these difficulties was patented by Charles Morton in 1927. In his system there was a pair of small rolls, both top and bottom, set close to the front rolls. As the rolls were of the same size, the surface speeds of the two were matched more closely. The problem of deflection of the bottom driving roll was nullified by supporting the small roll by a much larger roll which served as a driver roll.

Although an improvement, Morton's method did not completely solve the problem of maintaining a uniform surface speed between the top and bottom rolls. A further solution was offered by gearing the two rolls together. This gave uniform speed but introduced a new problem of cleaning the rolls to prevent fibers from packing in the gear teeth. Another method was to install permanent magnets in the rolls. This also would provide a more constant match of speeds, but the rolls were too expensive.

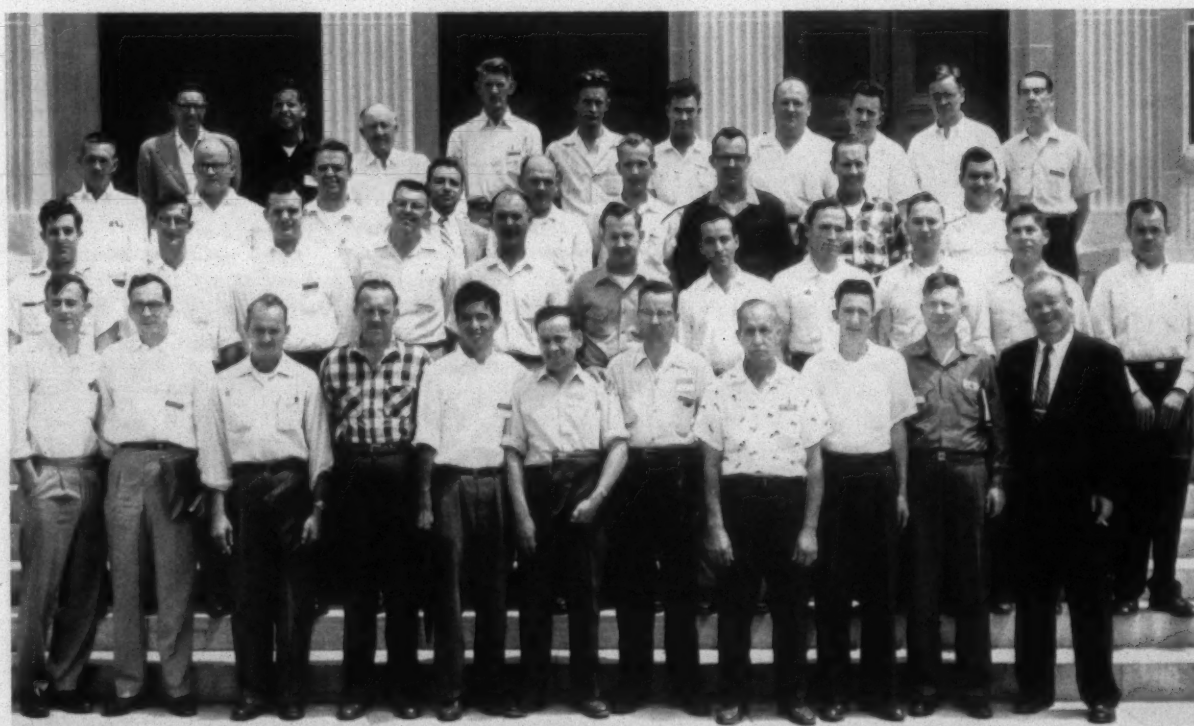
At about this time another tack or approach to the problem was devised. As stated earlier, the middle top roll must perform a number of mechanical functions which are in direct contradiction to each other. In addition, it must operate on an antagonistic basis. First, it must hold the fibers in a secure grip to draw them from the back roll and to draft out the twist used to hold them in place while

in the form of roving. Secondly, it must permit the fibers to slip forward so as to prevent breaking them while undergoing the major drafting between the middle roll and the front rolls. One solution to the problem of a firm grip, requiring pressure, and of a loose grip, necessitating a minimum of pressure, was to employ two rolls. This also had the advantage of permitting the use of a large diameter roll in back, where the pressure was needed, and a much smaller roll in front. The small front roll aided in attaining another objective, which is to set the middle roll very close to the front roll so as to control the short fibers up to the point at which they are gripped and brought under the positive action of the front rolls.

There were several different types of four-roll frames placed in wide use, both in this country and abroad. The most common arrangement in this country was to apply strong pressure on the back one of the two middle rolls

by means of a conventional weighting system. This gave the grip necessary for drafting and unlocking the roving twist. The front of the two middle rolls was completely unweighted except by its own weight. As the roll was small, the nip was not tight enough to break fibers. Other systems, particularly in England, used self-weighted rolls in both positions. In these instances, weight was regulated by changing the diameter of the rolls. The front roll of the two was of the necessary lightness because of a small diameter. The back roll was made of much bigger diameter to increase the weight. The only drawback to the back roll was that the diameter could not be large enough to exert sufficient pressure to draft out and unlock the fibers when the roving had any degree of twist.

Thoma of Fitchburg Yarn Mills extended the principle of four rolls and included a plate between the back bottom and middle bottom roll. This element was granted a patent



Brown, Goulston, Pawlak, Mabry, Benjamin, Swint, Moore, Hamson, Brayton, Morrisette
Parker, Vinson, Connors, Netti, Zuk, Adams, Rockwell, Bluemel, Beidl
Surdel, Pope, Callaway, Bliss, Galgovich, Danforth, Amaya, Greene, Sacks, Hitchcock, Mooney
Barlament, Hayne, Frey, Richardson, Tsukamoto, Berthold, Gilbert, Garnesky, McIntosh, Hayden, Lawlor

COMPLETE L.T.I. WOOLEN CARDING AND SPINNING COURSE—Completing the two-week Davis & Furber Machine Co.-sponsored course in woolen carding and spinning at Lowell Technological Institute June 29 were those shown. *First row:* Robert L. Barlament, Appleton (Wis.) Woolen Mills; Hugh A. Haynie, Celanese Corp. of America, Burlington, N. C.; William F. Frey, W. J. Dickey & Sons Inc., Oella, Md.; Clayton G. Richardson, North Star Woolen Mill Co., Sanford, Me.; Thomas Y. Tsukamoto, Rutherford, N. J.; Paul-Emile Berthold, Paton Mfg. Co. Ltd., Sherbrooke, P. Q.; Armand Gilbert, St. George Woolen Mills, St. George Beauce, P. Q.; John Garnesky, The Aldon Spinning Mills Corp., Talcottville, Conn.; Ernest L. McIntosh, Worumbo Mfg. Co., Lisbon Falls, Me.; Malcolm E. Hayden, Wyandotte Worsted Co., Rochester, N. H.; Martin Lawlor (one of the speakers), waste control supervisor, J. P. Stevens & Co. Inc., North Andover, Mass.

Second row: Walter G. Surdel, The Aldon Spinning Mills Corp.; Norman F. Pope, Appleton Woolen Mills; Richard F. Callaway, Chatham Mfg. Co., Elkin, N. C.; Jay W. Bliss Jr., Joseph W. Galovitch and Harry C. Danforth, Farnsworth Mill, Lisbon Center, Me.; Ivau Amaya V., Panos Vicuna Santa Fe, Medellin, Colombia, S. A.; Willie E. Greene, Excelsior Mills, Union, S. C.; Howard B. Sacks, Lewiston (Me.) Woolen Co.; Robert G. Hitchcock, Albany (N. Y.) Felt Co.; Benedict Mooney, Pepperell Mfg. Co., Biddeford, Me.

Third row: Hubert H. Parker, Chatham Mfg. Co.; James L. Vinson, Hatch Mill Corp., Columbus, N. C.; Mark R. Connors, H. Waterbury & Sons Co., Oriskany, N. Y.; Anthony Netti, Davis & Furber Machine Co., Andover, Mass.; John Zuk, A. & M. Karagheusian Inc., Freehold, N. J.; R. Thurmon Adams, Riverside Mills, Augusta, Ga.; Robert E. Rockwell, Rockwell Woolen Co., Leominster, Mass.; Robert W. Bluemel, Sutton's Mills, Methuen, Mass.; Joseph F. Beidl, Albany Felt Co.

Fourth row: Prof. Russell L. Brown, L.T.I. director of the course; Arnold Goulston, Geo. A. Goulston Co., Boston, Mass.; Mike Pawlak, Western Felt Works, Chicago, Ill.; J. Walter Mabry, James Lees & Sons, Glasgow, Va.; Robert H. Benjamin, The Magee Carpet Co., Bloomsburg, Pa.; Earl Ray Swint, Riverside Mills; Melvin Moore, Fieldcrest Mills Inc., Spray, N. C.; Norman T. Hamson, W. J. Dickey & Sons; Roswell Brayton, Woolrich & Pearce Woolen Mills, Woolrich, Pa.; Armand F. Morrisette, J. P. Stevens Co., Andover, Mass.

on the basis of the utilization of a new principle, since used elsewhere, known as the serpentine, or broken line, arrangement. If a roll or a plate is placed in a drafting element either above or below a straight line drawn through the nips of the pairs of drafting rolls, then the fibers are wrapped around a greater portion of the circumference of the element that is out of the horizontal position. In drafting, the fibers are then pulled around this unit so that it acts to create a retarding effect.

Thoma's drafting systems, together with other elements based on these principles, were definitely improvements in some types of drafting. However, it was found that a stationary plate was not completely satisfactory because only one side of the strand of fibers was controlled. The top fibers were free from the snubbing effect and this caused uneven tensions and irregular drafting. In addition, the small middle roll could not be set close enough to the front rolls to completely control the short fibers.

The belt, or apron, was to be the answer to the shortcomings of the plate and the slip roll. Casablanca of Spain was the first technician to offer a successful drafting element using aprons. In 1913 he offered a system which was commercially practical, but not completely satisfactory. The trouble with this method was that it took heavy pressure to drive the two aprons, top and bottom, at the same speed. Secondly, the leather aprons varied considerably, and the variations in thickness and flexibility were reflected by variations in drafting. The first objection, that of uneven speed, was reduced by using a driving roll with a sawtooth fluting to get a better grip. This was later changed to a knurled roll, such as is now in use. The second difficulty was never completely solved until the comparatively recent development of synthetic aprons.

Although developed by Fernando Casablanca in Spain in 1912, and exhibited in that country in 1914, the first public showing of his system in the United States did not take place until 1926.

While the Casablanca system has been vastly improved and is extremely successful, another type of drafting element has given it severe competition. This is the single-belt system, the Roth method, first originating in Europe and perfected in this country. The single-belt system used a bottom apron but substituted a pair of top rolls for the upper apron and its cage. Instead of a cage, or metal framework, and a short apron of the Casablanca design, the bottom apron was longer and ran over a bar placed close to the back of the front roll. The greater length of the apron, plus a heavy tension roll beneath the drafting rolls, eliminated the uneven drafting caused by variables in the leather apron.

The middle top rolls consisted of a weighted roll and a small unweighted, or slip roll. The weighted roll worked with the back rolls to effectively draft out the twist in the roving. In addition, the apron was driven by the top and bottom rolls at a uniform speed because of the heavy pressure applied at this point. The small slip roll was held directly in back of the front roll, and over the nose bar guiding the apron. Because of its small size it could be placed close to the nip of the front rolls to control the fibers when they became free of the nip of the weighted middle top roll. Because of its light weight, the fibers could be drawn forward from beneath it without breakage. At the

same time, the apron supported the short fibers while free, and this prevented them from moving out of position during actual drafting.

The top apron, on the other hand, permits setting the control unit very close to the back of the nip of the front rolls. The wedge shape of the total top and bottom apron units, the top apron cage and the bottom apron bar, thus carries the fibers more closely to the front roll than could a system in which a slip roll is used, regardless of the diameter of the roll. This close setting is desirable because there is less distance for the fibers to travel while comparatively free from positive control. The better tension of the lower apron, coupled with the closer setting of the control unit, seems to have been obtained by using the most desirable features of the two systems without retaining the disadvantages inherent in the original methods.

In 1939 another original design of drafting element was released, and soon became commercially successful. This was the Shaw type of control, which added a new principle while still based on the Roth method of using only one belt. The essential difference between the Roth and Shaw is the use of only one top middle roll instead of a pair, as in the Roth. This drafting system is of primary interest because it solves the problem of causing a roll to perform the two contradictory acts of positively drawing and holding the strand of fibers back to the back roll, while at the same time allowing the fibers to slip forward as they are drafted in the front draft.

The Shaw principle, which has since been extended to roving and to drawing, is founded on using a single top middle roll working in conjunction with the middle bottom roll and the apron bar. The top roll is supported at each end by a collar, not an integral part of the arbor, which rests on a ledge of the cap bar. The roll is so supported by the collars that it rests under firm pressure against the middle bottom roll. This pressure creates a nip which drives the bottom apron, and also forms the positive grip required to produce a two draft zone system.

The collars also prevent the top roll from contacting the apron bar, or more exactly, the apron passing over the bar. The roll is maintained at a predetermined distance from the apron bar. While the apron and the top roll are not in direct contact, the clearance between them is so small that there is a definite pressure on the fibers at this point. This pressure is the fundamental reason for the success of this system of drafting, as it is sufficiently pronounced to hold the fibers in their place in the strand but will still allow them to be pulled forward from this position, while still under a restraining control, as the front draft demands their movement forward in an orderly and regular manner.

Finally, we come to the popular type of changeover which is now being adopted throughout the industry. This changeover is a combination of the Roth type of element and of the Casablanca two-apron system. The long bottom apron and apron bar of the Roth element is retained, but the top slip roll is replaced by a short apron and cage distinctive of Casablanca. The advantage of this type of two-apron system is that a long bottom apron is used, which most technicians consider is better able to maintain the correct degree of tension and also is easier to clean.

This brings us up to the present-day developments in the perfection of the drafting elements which are commercially practical and in comparatively widespread use. There are many variations which do not depart from the basic ele-

ments that have been outlined here. There are other drafting elements now used on a limited basis that are composed of different applications of the principles that have been discussed. Special conditions, experimental models, and elements designed to accommodate specific types of fibers

have all either forced or encouraged the use of new types of drafting systems. The aim of all of them is still to mechanically duplicate the human hand in its responsiveness to changing variations in fibers and strand characteristics, as used with the old spinning wheel.

Warp Preparation & Weaving

A Study in Loom Fixing

By FRANK D. HERRING—Part Eight

When a loom fixer is called to work on a loom that is not functioning properly, he must, or at least should, determine the cause of the trouble before he goes to work on the loom. Too many loom fixers create a lot of additional and unnecessary work for themselves by relying on guesswork in determining a starting point. There are always some specific things he can check that will help him quickly ascertain the real trouble. In this article, certain troubles will be named, and the things which most contribute to these troubles will be pointed out.

REGARDLESS of what is wrong with a loom, when the loom fixer is called to work on it, he should always examine the shuttle carefully to determine if the shuttle and all of its component parts are in good condition and properly adjusted. If the shuttle is excessively worn, rough or splintered, it will cause excessive warp yarn breakage. If the shuttle eye is defective in any way, or the shuttle spring loose or out of alignment it will cause filling breakage while the loom is running. All this will add up to unnecessary work for the weaver and the loom fixer, and also much loss of production.

When the loom fixer goes to a loom and finds that the shuttle is being excessively worn, he should take steps to remedy this condition before leaving the loom. The prevailing idea among most all weave room men of today is that the loom being out of line (the reed out of line with the back box plates) causes most of the wear on the shuttle. It is true that this will cause some wear on the shuttle, but it is not the primary cause. The primary reasons for wear on the shuttle comes from three sources; the boxing of the shuttle, the setting and timing of the harness, and the pick motion.

To fix a loom for excessive wear on the shuttle, the fixer should check the following things in the order named. (It is easy for the fixer to memorize this routine check, and is good loom fixing for him to follow through on it whenever he is confronted with this condition.)

The reed.

The reed and back box plates, with reed square and straight edge.

Setting and timing of the harness.

Boxing of the shuttle.

The pick motion.

Regardless of what the loom fixer is called to the loom for he should always check the shuttle and the reed, to determine if the shuttle is in good condition, and also if the reed is in good condition and tight in its place in the lay from end to end. If the reed is loose it will have the same effect as the reed being out of line with the back box plates.

To maintain consistent and efficient operation of the loom, the shuttle must have free and uninterrupted passage across the lay, between the top and bottom sheds of the warp yarn. In order to make this condition possible, it is absolutely necessary that each and every harness shed be properly adjusted in relation to the race plate in its "down" position, and also be raised to its extreme top position allowed by the upward stroke of the treadle. The harness cams must be timed in relation to the pick so that the sheds will be wide open when the shuttle enters on its passage across the lay, and remain in wide open position until the shuttle clears on the opposite end. If the bottom shed is too high in relation to the race plate it will deflect the outgoing end of the shuttle upward and cause it to strike the top of the back box plate on the opposite end of the lay, and this will create excessive wear on the top side of the shuttle. And, of course, if the bottom shed is excessively high in relation to the race plate it will sometimes cause the shuttle to be thrown out of the loom. The bottom shed should be adjusted to where the warp yarn will just barely clear the race plate when the lay is in back center position, and the harness sheds at their extreme open positions.

Setting the harness is one of the vital necessities to good loom fixing, because if the harness are not set properly the shuttle cannot box properly and this will cause the loom to slam off. It also will cause the shuttle to be thrown out of the loom, and will create excessive wear on the shuttle, because if the shuttle does not box correctly it will cause the shuttle to be worn and splintered, and this not only shortens the life of the shuttle, but will also cause excessive

warp yarn breakage. If the harness are not timed correctly in relation to the pick it also causes additional wear on the shuttle besides failing to box properly. If the harness are not in wide open position when the shuttle enters between the warp yarn sheds the shuttle will be depressed back against the reed, and of course, will create wear on the back wall of the shuttle. The same thing will happen if the harness sheds start closing before the shuttle clears from between the sheds on the opposite end of the lay, because this will also depress the shuttle back against the reed. This depressing of the shuttle back against the lay creates a condition we refer to as a washboard shuttle because the back wall of the shuttle will have a series of ridges on it, resembling a washboard. When a shuttle gets in this condition it will accelerate the wear on its self, because it will not track straight on its passage across the lay, and therefore will not box properly.

Boxing the shuttle correctly consists of quite a lot of work, and the moving and adjusting of a lot of different parts, but only the parts involved in this chain which can contribute to the wearing of the shuttle will be mentioned. When the shuttle is all the way up in the shuttle box, there should always be at least one-eighth of an inch play between the protector rod finger and the end of the back binder, where it makes contact with the finger. This will prevent wedging, or pinching of the shuttle in the shuttle box. If the shuttle is wedged tight in the box it will cause excessive wear on the shuttle, and also the leathers on the back and front binders. If the shuttle is wedged in the shuttle box it will create a harsh or heavy pick when it is driven out of the box. In other words, it will put additional strain on all parts of the pick motion, and this additional strain will cause the picker stick to bend slightly before the shuttle is driven out of the box. Such bending of the stick will cause a slightly delayed pick, and in this event the shuttle will not be delivered from the shuttle box on a straight course, and thereby cannot track straight on its passage across the lay, and consequently it cannot box properly in the opposite shuttle box.

Putting on the pickers, or at least determining if the pickers are on correctly, is a very vital part of the procedure of boxing the shuttle. When boxing the shuttle the fixer should pull the shuttle back into the shuttle box to a point where the point of the shuttle will be about one inch from the picker, then adjust the front and back box plates to where the point of the shuttle near the picker will be exactly over the center of the picker stick slot in the lay. Then the picker should be put on so that the point of the shuttle contacting the picker will be exactly in the center of the reamed out hole in the picker (the hole in the picker is reamed to receive the point of the shuttle). Then the picker should be paralleled so that the point of the shuttle will still be exactly in the center of the hole in the picker when the picker stick is on the extreme forward stroke of the pick. The picker is supposed to be put on the picker stick, a tight driving fit, and paralleled with the shuttle point, and then secured to the picker stick with a screw. The hole in the picker is supposed to be reamed out so that the point of the shuttle will fit securely in it when the shuttle is all the way back in the shuttle box. If the picker is secured on the stick too low to receive the shuttle point on a parallel line it will cause the bottom side of the shuttle to be depressed

down against the lay end plate, and as the lay end plate has a slot in it, the shuttle will be worn on the front and back sides of the bottom on the shuttle. If the picker is secured to the picker stick too high it will cause the shuttle to be driven against the back box plate as it leaves the shuttle box on the forward stroke of the picker stick, and this will create excessive wear on the back side of the top of the shuttle.

The center point of the cone-shaped hole reamed in the picker should be directly in line with the center of the picker slot in the lay. That will put it in direct line with the point of the shuttle after the shuttle has been correctly boxed as mentioned above. If the picker is drawn to the right, or to the left when it is driven onto the picker stick, it should be taken off and trimmed out, as the need might be, to draw the center of the cone-shaped hole directly in line with the point of the shuttle. This will insure straight-line delivery of the shuttle as it leaves the shuttle box after the pick. But if the picker is drawn out of line, to the right, or to the left, the shuttle will not be delivered on a straight line from the shuttle box, and therefore it cannot follow a straight directed course across the lay and into the shuttle box on the opposite end of the lay. When the shuttle travels across the lay as it should, without being deflected from its proper course, a minimum amount of power on the pick is required to deliver it from end to end of the lay, and into the shuttle boxes. But if the shuttle is deflected in any way on its passage across the lay, the loom fixer is faced with two alternatives: he must check and locate the cause of the trouble, and fix the loom; or he must put additional power on the pick, and drive the shuttle across and into the shuttle box by force, and this will greatly decrease the usable life of the shuttle. When the loom fixer adds more power to the pick than is necessary under favorable conditions he is inviting trouble for himself and also the weaver, because this excessive power will create additional strain on all parts of the pick motion, and cause unnecessary wear and breakage on numerous parts throughout the entire loom.

The pick motion consists of many parts, beginning at the rocker shaft and extending back through to the pick cam, but only the parts which can contribute to the wearing of the shuttle will be mentioned here.

The timing of the pick, and the stroke on the picker stick are the two parts of the pick motion that the fixer should check for excessive wear on the shuttle.

Many of the older model looms in operation today were designed to pick on top center position of the crank arms. In other words, the parts of the pick motions are supposed to be set so that the shuttle will start moving out of the shuttle box when the crank arms are on exactly top center position, but most of the later model looms are designed to pick before the crank arms reach top center position. The fixer of course should be familiar with the type loom he is working on.

If the loom is picking too early the shuttle will be driven out between the warp yarn sheds before they are wide enough open to receive it, and this will depress the back wall of the shuttle back against the reed on every pick, and this will create excessive wear on the back wall of the shuttle. This type of wear on the back wall of the shuttle will be the same as when the harness does not open soon enough to receive the shuttle, and when the harness closes too early before the shuttle clears from between the sheds,



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already mentioned herein, giving a washboard appearance to the back wall of the shuttle.

If the loom is picking too late, it will have the same affect on the shuttle as boxing the shuttle too tight in the shuttle box. It will create a harsh, heavy, delayed pick, and the shuttle will not track straight on its passage across the lay, and therefore it cannot box correctly on the opposite end of the lay. This heavy delayed pick will also sometimes cause the shuttle to be thrown out of the loom, and when this happens it will sometimes damage the shuttle beyond repair, and also is very likely to break other parts which the shuttle might contact—to say nothing of people in its path.

Another thing that will damage the shuttle, and very often beyond repair, is the transfer mechanism. If the lay is not positioned properly in relation to the battery stand, it will cause the transfer of the bobbin from the battery into the shuttle too early, or too late, and in either event the ingoing bobbin will ride over the front or back wall of the shuttle, and the rings on the bobbin will cut the shuttle, and sometimes break it. But as previously mentioned, the fixer should always examine the shuttle carefully everytime he is called to a loom to work on it, and he should always detect this condition and make the necessary corrections before leaving the loom.

Another thing that will cause the shuttle to fail to box properly, and create unnecessary wear on the shuttle, is lost motion in the crank arms, but this was not included in the routine check, because the fixer will always place one hand on the lay when he starts the loom, and he should readily detect the irregular rotation of the lay, and of course he should correct this condition.

S.T.A. Divisions Hear Positrol Engineer

A. L. Park, research engineer with Saco-Lowell Shops at Boston, Mass., was the speaker at two meetings this Spring of Southern Textile Association divisions. His subject, "Weave Room Requirements in Slashing," was discussed at the S.T.A. Eastern Carolina Division meeting April 21 at Raleigh, N. C., and again at the Piedmont Division meeting May 5 at Hickory, N. C.

The first part of his talk outlined the mill-proven features that a modern slasher should have to produce warps with a high weaving efficiency. These features were said to be: (1) automatic warp tension control at all times; (2) proper preparation of the size mix; (3) uniform application and secure anchorage of the size mix to the yarn; (4) maintenance of a uniform viscosity in the size vat; (5) use of multiple stages (more than a single yarn pass) in the drying process; (6) drying the warp by evaporating the moisture from within the yarn; (7) supporting the yarn evenly throughout the passage between the carrier rolls by means of equal air pressures from both above and below the yarn; (8) complete elimination of rolled selvages and crossed ends; (9) careful control of the humidity within the dryer during the dryer process; (10) introduction of moisture into the drying chambers whenever the slasher is halted to prevent excessive drying out of the yarn; (11) a minimum number of carrier rolls within the dryer; (12) accurately controlled temperature through the medium of highly sensitive control instruments; (13) properly designed head end with a zig-zag comb in a location accessible to the

operator at all times; (14) maintenance problems kept at a minimum and easily solved. He said the end result should be a slasher small in size, high in efficiency, low in cost of operation, with easily accessible controls and working areas—all of this with possible increases in production.

During the second part of the presentation Mr. Park showed a series of black-and-white and color slides of the brand new Saco-Lowell Positrol hot-air slasher. He pointed out that this machine represented 20 years of experience gained from actual mill slashing techniques and problems and embodies all the requisites of modern slashing as previously outlined. A pilot model Positrol slasher was installed four years ago at the York Division of the Bates Mfg. Co. and has been in constant production since.

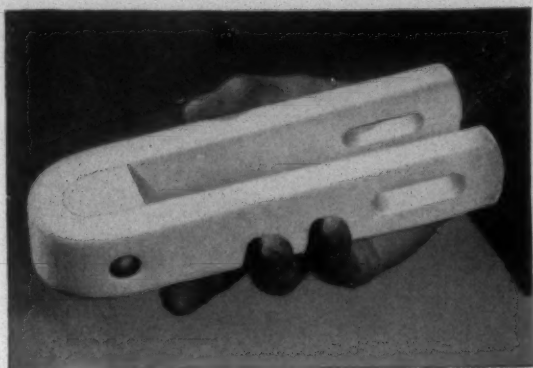
Many different types of warps have been successfully slashed on the Positrol, including an 8,000 end warp of 90s Sudan combed cotton yarn and one of 75-denier low-twist acetate filament run at 80 yards per minute. Both warps were run with no changes other than minor adjustments.

By means of the slides Mr. Park showed that the Positrol slasher includes three separate drying chambers or passes. The total length of warp in these drying chambers at one time is 15 yards. The hot air action is such that the drying air is blown at a 1,000 foot per minute velocity in a direction opposite to the passage of the wet, sized yarn. This action suspends the warp evenly between the carrier rolls and carries the moisture away from the yarn. The use of adjustable baffles to smoothly divert secondary air currents in the drying chambers has eliminated the rolled selvage and crossed ends problem found in the usual hot air slashers.

The five-layer air intake filters were shown. Every bit of air entering the slasher drying chambers must pass through these filters and as a result the interiors of the drying chambers need never be entered for cleaning purposes. The new insulated size vat holds only 22 gallons of starch and automatically replenishes itself on a 40-second cycle. This means savings in steam consumption and the assurance that only fresh size is being applied to the yarn. Size is positively applied to the yarn by the squeezing action of the rolls in the vat which squeezes out the air in the yarn and allows the size to replace it. As high as 26 per cent solids have been placed on yarn run on the Positrol slasher. The new creel was shown with its air-powered tension brakes. The tension rolls were said to be very sensitive and to hold a constant tension from the full section beam to the empty section beam.

The first textile machinery exposition in the United States was put on in Atlanta, Ga., in 1881, sponsored by New England manufacturers. It has an ironic twist. The idea was to impress the farmers in the greatest cotton growing area of the world of the need for properly preparing the fiber for mill use. Many farmers came to see what was to be seen; but business men and bankers came too. As soon as the exposition was over, Atlanta banking and business interests bought the exposition building and the machinery there and converted them into Exposition Mills, still in existence. The exposition stimulated the cry, "Bring the mills to the cotton fields!" throughout the Piedmont Plateau of the Southeast where there were streams for water power, and the next two decades saw countless mills spring up.

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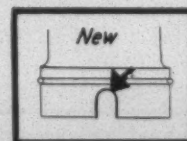
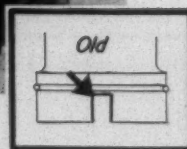
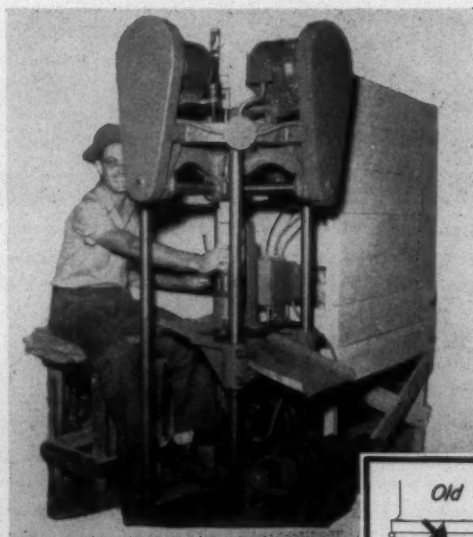
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Bleaching, Dyeing & Finishing

A Report on L-22 Finishing After Nine Months' Operation

By JOHN E. REEVES, President Reeves Bros. Inc.

Reeves Bros. Inc. was the first firm to adopt American Standard L-22 in the textile industry. This paper, delivered recently at Washington, D. C., analyzes the bad situation existing in rayon finishing and tells what Reeves is doing about it.

THE textile industry has always been an enigma to people not connected with it. In fact, I venture to say that sometimes it's an enigma to many people in it, as well. You would think that a piece of cloth, or the fabric in a dress, or in a bathing suit, or a boy's pair of trousers would be a relatively simple thing to manufacture.

In most cases it is, certainly as compared with many other items in modern day life. But in the last few years, textiles have become far more technological than ever before. More new textiles . . . both fibers and finishes . . . have been developed in the last ten years than in the preceding 2,000 years.

Therefore, it is only natural, I think, that performance standards haven't been developed overnight, especially with regard to rayons.

However, it is now time for the industry to get together on one workable standard, because this matter has become serious. Although production of rayon fabrics for apparel is still relatively small as compared with cotton, rayons nevertheless represent a huge amount of goods.

However, with regard to consumer satisfaction, rayons have been the worst offenders. According to a reliable report made last year, of the total number of customer complaints, linen represented 1.1 per cent, silk 4.5 per cent, wool 18.8 per cent, cotton 21.3 per cent and the rayon-acetate and other synthetics group 54.3 per cent. Of this group, rayon-acetate fabrics accounted for 76 per cent of the complaints.

Therefore, as you can see, the major producers in the rayon industry have too much to lose unless this situation is corrected. But in order to do so, we must have assistance from other members in the commercial chain that links what we make, fabric, with what the consumer buys, a garment. These other members are the garment manufacturer and the retailer . . . especially the retailer.

Most importantly, in order to get the assistance of the retailer, we need to enlist the aid of other forces that help determine the buying habits of the consumer.

In order to point out how we can accomplish our joint

purpose, I would like to spend a minute in a brief analysis of textile manufacturing methods.

First, rayon fabrics are not subject to many of the problems that confront fabrics made from natural fibers. The rayon industry is not dependent on climate, insects, chemical composition of soil, drought or other natural hazards. It can control chemical composition of filaments, yarn size, length of staple, spinning and weaving—and it *does*. It can also control dyeing and finishing if it *wishes*.

Second, a great portion of the textile industry is not integrated. By integrated I mean the position of a manufacturer who controls every step from raw fiber to finished fabric. True, there are many large textile concerns that are integrated, but their total output is in the minority as compared with the whole. And despite their individual size, they are constantly compelled to compete with inferior fabrics finished by a great many independent finishers.

It works this way: a large producer of a quality rayon staple sells his staple, or raw stock, to a responsible mill. This mill may be only a spinning mill, a producer of yarns. It may be a mill that not only does spinning but weaving as well. There are hundreds of such mills in this country that range in size from 50 looms to 1,000 looms. Most of them are independently owned and are competently managed. Their product is greige goods.

Many of these mills sell their output to converters. A converter is a sort of fabric wholesaler. In most cases a converter will style a fabric and shop around for a greige goods mill to make it for him at a specified construction, yarn size and price. This converter will then shop around for a finisher, again, specifying shade, hand and price. Then he orders his greige goods supplier to ship the goods to the finisher he has selected.

At this point lies the crux of our problem . . . for trouble can happen in either of two ways. First, the fabric may be finished by a reputable finisher, but one who does not prove his performance by check testing. Even with intelligent formulas, he will unknowingly deliver, as first quality, a certain percentage substandard that would not be so if properly tested. Second, the fabric may be finished by an unprincipled finisher . . . and unfortunately there are many of this type in the market today.

They are wizards at finishing a piece of cloth so that it has a nice hand, a good looking appearance and usually no other visible defects. But all too often they omit many of

the hidden, yet essential finishing steps which give a fabric its quality and inherent value.

Why do they do it? Because they can offer a finishing price considerably lower than a responsible finisher can meet. Why do they get away with this shoddy kind of business year after year? Because these converters and their unbranded garment manufacturer customers have learned to take a calculated risk. Why do they take this risk? Because too many hard-pressed, quota-minded, price-conscious retail buyers compel them to.

It is curious to me that such retailers seemingly find it profitable to continue this practice year after year. I understand that several large retail organizations had losses that ran into the millions on returned rayon garments in 1955. This pattern is being repeated daily in thousands of stores all over the country.

Does it make any sense to conduct business under these conditions? Do we need any stronger evidence than this of the dire necessity for predictable fabric performance?

That is the reason why we at Reeves Bros. decided last year something had to be done about it. It was our belief that the standards sponsored by the National Retail Dry Goods Association and approved by the American Standards Association were the proper minimum standards. And so, after very intensive research, we arranged to set up our Bishopville Finishing Plant to finish fabrics according to the A.S.A. L-22.

This step was taken at considerable cost. But we believed it would lead to sound, profitable business if we could prove that such quality finishing could be a practical operation; that a finishing plant could be established and maintained on this performance level . . . and at the same time compete with second-rate finishing.

We were aware that unusual problems would arise and that solutions for them would have to be found. We were aware that there would necessarily be refinements and improvements to keep abreast of new fibers and new fabric constructions.

It was an enormous task—this procedure of trial and error—but the results to date have justified it. In all the processing we have done under American Standard L-22, since our announcement last September, we have not received a single complaint, a single claim or a return of any nature.

A fair portion of these goods will be in garments carrying a Reeves L-22 hang-tag for sale this Fall. These tags have been restricted to manufacturers with a reputation for acceptable quality to cut, make and trim. We are confident these garments will give the wear expected for the price they cost—certainly far better wear than slightly cheaper garments made of fabrics finished under no identified standard.

Although their total is small in relation to the whole industry, at least a start has been made. These garments are principally men's and boy's trousers, the type of clothing that shows wear more quickly, perhaps, than any other.

We are spending every effort to convince top level management in the large retail firms that they instruct their buyers to buy *only* these garments, when made of rayon fabrics, finished according to L-22. We are confident that in the very near future such action will be taken. Furthermore, we are endeavoring to convince them that they should advertise this quality, promote it and really get behind it and sell it.

I believe they will be astonished with the public's reaction,

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A Round-Up Of A.A.T.C.C. Activities



George P. Paine

The national council of the American Association of Textile Chemists & Colorists has approved the appointment of George P. Paine as the organization's first paid administrative officer. Mr. Paine, whose title will be that of executive secretary and assistant treasurer, is currently assistant secretary and director of public relations for the American Standards Association. He will assume the duties of his new post some time this Summer. Mr. Paine, who has been with the A.S.A. since 1946, was nominated for the A.A.T.C.C. post by Raymond W. Jacoby, A.A.T.C.C., president, following an introduction by Henry F. Herrmann of General Dyestuff, who headed the committee interviewing candidates. The council recorded a vote of gratitude for the long years of service of Harold C. Chapin, who is retiring as secretary in August, and of Albert E. Sampson of National Aniline Division, Allied Chemical & Dyestuff Corp., treasurer. Mr. Sampson, who submitted his resignation earlier, has volunteered to continue as treasurer at the convenience of the council.

* * * *

Other A.A.T.C.C. activities last month included a meeting June 14 of the association's executive committee on research. Business conducted at this meeting included the establishment of a new committee to evaluate the places in which electric heating can help the textile finishing industry. Edward W. Lawrence, director of the research and development laboratories, Cranston (R. I.) Print Works, was appointed chairman of the new committee. Other committee members will be appointed later.

Leonard S. Little, textile consultant and past chairman of the executive committee on research, reported that the International Organization for Standards has completed plans for meetings this September, in the week preceding the opening of the A.A.T.C.C.-sponsored Perkin Centennial. Meetings on colorfastness will be held Wednesday through Friday, Sept. 5-7.

The executive committee on research also directed the A.A.T.C.C. flammability committee to compile a complete history of the development of the A.A.T.C.C. flammability tester, and that this record be turned over to the National Fire Protective Association for study.

* * * *

The Piedmont Section of the A.A.T.C.C. held its annual Summer outing June 8-9 at the Mayview Manor, Blowing Rock, N. C. An election of officers at this meeting installed Clement O. Stevenson, Ciba Co. Inc., Greenville, S. C., as chairman of the section to succeed Clarence Hooper, Burlington Decorative Fabrics Associates, Burlington, N. C. Other officers elected include W. E. Rixon, Carbide & Carbon Chemical Co., Charlotte, N. C., vice-chairman; Linton C. Reynolds, Riegel Development Laboratories, Ware Shoals, S. C., secretary; and J. C. King, Metro Atlantic Corp., Greenville, S. C., treasurer.

Named councilors for three-year terms were Clarence Hooper and Paul B. Stam, Burlington Industries, Greensboro, N. C. Named to a one-year term as councilor was R. Hobart Souther, Cone Mills Corp., Greensboro. Named sectional committeemen were J. Leslie Heaton, Lyman (S. C.) Printing & Finishing Co.; Henry H. Latham, Arkansas Co., Greensboro; Daniel A. Torrence Jr., Ciba Co., Greensboro; and Robert L. Ward, Leaksville Woolen Mills, Mount Holly, N. C. Arthur R. Thompson, Ciba Co., Charlotte, was re-elected custodian, and Leonard Slesinger, Dexter Chemical Co., Charlotte, was named social chairman.

Winners in the section's golf tournament at the annual outing were Richard J. Rendleman, Proctor Chemical Co., Salisbury, N. C., and M. F. Spencer, Cannon Mills Co., Kannapolis, N. C. Mr. Rendleman won low gross honors with an even par 70 on the Blowing Rock course. Mr. Spencer won low net honors with a score of 121-54-67. The section's new vice-chairman, W. E. Rixon, placed second in low net scoring with a card of 101-33-68. Some 150 golfers participated in the tournament.

* * * *

Other sectional golf tournaments held last month included the Southeastern Section and the South Central Section. Results of these tournaments, both of which drew many participants, were as follows:

Southeastern Section—(Radium Country Club, Radium Springs, Ga.)—Hugh (Spot) Brown, Pepperell Mfg. Co., Lindale, Ga., repeated as winner of low gross honors with a round of 81, a stroke below his winning round of last year. For the mill men, Roscoe Whitney, Coats & Clark, Albany, Ga., had a 73 for low net honors. Jack Crist, Southern Dyestuff Corp., Charlotte, N. C., took low gross honors in the suppliers group with a 75. Sharing low net honors among suppliers were Gould Bernard, Carbide & Carbon Chemical Co., Atlanta, Ga., and Ed Murphy, Proctor Chemical Co., Salisbury, N. C., each with a score of 70. Some 240 members and guests attended the outing.

South Central Section—(Chattanooga Golf and Country Club, Chattanooga, Tenn.)—Dan Rion, Nopco Chemical Co., Athens, Ga., won members' low gross with a 76. Last year he won permanent possession of the trophy donated by American Aniline Co. by winning low gross for the third time. Winning low gross honors among mill men was Dick Thomas, Roxbury Southern Mills Inc., Chattanooga, with a 73. Winning low net for mill men was Harvey E. DeLay, Standard-Coosa-Thatcher Co., Rossville, Ga., with a 96-24-72. Fletcher Kibler, Morningside Chemical Co., Chattanooga, had a 77-6-71 to post low net for suppliers.

Walter Hamburger Rolls Up Olney Medal



Walter Hamburger

Dr. Walter J. Hamburger, director and treasurer of Fabric Research Laboratories, Dedham, Mass., is the 1956 winner of the Olney Medal of the American Association of Textile Chemists and Colorists. This medal is the highest award of the A.A.T.C.C., largest textile association in the U. S., and is given each year for "outstanding achievement in the field of textile chemistry."

Dr. Hamburger has been connected with Fabric Research Laboratories since 1942, and before that was treasurer and

technical director of H. Schindler & Co. Inc., Canton, Mass., with whom he worked from 1930 to 1944. Prior to 1930 he served in general engineering capacities and was in the paper industry for several years as an industrial engineer.

Dr. Hamburger received his bachelor of science degree in mechanical engineering from Massachusetts Institute of Technology in 1921; his master of science in textile technology, also from M.I.T., in 1941; and his doctor of philosophy degree from Polytechnic Institute of Brooklyn in 1948. He has received other honors from several institutions, including an honorary M.S. from Lowell Technological Institute, and a certificate of distinction from the Polytechnic Institute of Brooklyn. He was Edgar Marburg lecturer with the American Society of Testing Materials in 1955, and is an honorary member of several professional groups.

Dr. Hamburger has published scientific papers in many technical and industrial publications, and is listed in American Men of Science. He is a member of Sigma Xi Society; a fellow of the Textile Institute, Manchester, England; past national councilor of the A.A.T.C.C.; past president of the Fiber Society Inc.; a member of the American Association for the Advancement of Science; and member of Committee D-13 of A.S.T.M.

His main fields of concentration have been textile technology; the mechanical behavior of filamentous high polymers; instrumentation; and sonic techniques for investigation of stress-strain relationships. His many activities have included visiting lectureships and professorships, with Massachusetts Institute of Technology textile division, Simmons College, Polytechnic Institute of Brooklyn, and Lowell Technological Institute.

He is presently chairman of the National Academy of Sciences national research council advisory board panel on textiles, and during World War II was consultant to the U. S. Army Air Forces on research direction of projects. He was also chairman of the committee on body armor of the National Research Council advisory board of quarter-master research and development, and is a member of the general research advisory committee of the Textile Research Institute at Princeton, N. J. He is a member of the board of directors of the Lowell Technological Institute Research Foundation and was chairman of the executive committee thereof from 1951-1954.

Linberg, Scott Are A.A.T.C.C. Nominees

George O. Linberg, vice-president of Synthron Inc., Ashton, R. I., and Dr. Walter M. Scott, assistant director of utilization research, U. S. Department of Agriculture, Washington, D. C., have been nominated for the position of president of the American Association of Textile Chemists and Colorists in 1957.

This is only the second time in recent years that councilors of the A.A.T.C.C.—representing members in the association's 14 local sections—have offered a ballot choice for the top post to the group's 5,500 senior members.

The election of next year's president and vice-presidents will take place in the Fall of this year, with senior members of the A.A.T.C.C. casting ballots sometime after Oct. 10. Additional nominations for the presidency and the vice-presidencies, however, may be filed with the secretary of the association up to Oct. 1, at his office in Lowell, Mass. Such nominations must be signed by at least 50 senior

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members, in the case of the presidency, and by 25 senior members, in the case of the regional vice-presidencies.

Mr. Linberg is a past vice-president of the A.A.T.C.C. and is currently general program chairman of the Perkin Centennial, week-long industry celebration to be held in New York at the Waldorf-Astoria this September. He is also chairman of the A.A.T.C.C. national convention committee, and a member of the president's advisory committee and the centennial committee.

Dr. Scott is currently A.A.T.C.C. vice-president from the Southern region, as well as chairman of the association's publications committee, chairman of the technical program committee, and member of the president's advisory committee, the centennial committee and the membership and local sections committee.

Vat Dye Institute Names Herrmann



Henry F. Herrmann

Henry F. Herrmann has been named executive secretary of the Vat Dye Institute, a new organization formed to represent the manufacturers of vat dyes in this country. Mr. Herrmann, a former president of the American Association of Textile Chemists & Colorists and director of the Textile Research Institute, will co-ordinate a program to increase the consumption of vat dyes in the textile industry. The promotion will be founded on an educational program starting with the ultimate consumer. The institute is expected to have a budget of between \$350,000 and \$400,000 for 1957.

Other officers of the institute include D. C. Newman, the Du Pont Co., president; Keith R. J. Horner, Toms River-Cincinnati Corp., vice-president; and H. J. Daigneault, National Aniline Division, Allied Chemical & Dye Corp., treasurer. J. Robert Bonnar, General Dyestuff Co., was appointed chairman of the technical committee; James J. Naylor, American Cyanamid Co., was named chairman of the promotion committee; and Mr. Daigneault was chosen to head the finance committee. The first general membership meeting is set for Tuesday, Oct. 9, at which time the present officers and directors are expected to be re-elected.

An American In European Finishing Plants

(This is the text of a talk made by Marshall Gardner, assistant vice-president of Cone Mills Corp. and manager of the company's print works plant at Greensboro, N. C., at a meeting of the executive committee of the National Association of Finishers of Textile Fabrics recently.)

For three weeks during March of this year, it was my privilege to visit various textile finishing plants in Germany, France, Switzerland, Belgium, Holland and England. Our party was primarily interested in printing operations, and the plants we visited were reasonably representative of European printing technology. In addition, we saw plain shade dyeing installations, and, in one instance, saw what would be considered an outstanding example of a modern European continuous dyeing range for vat colors.

People

In my opinion, the most important attribute and asset of any finishing plant is the work force. By this I mean the average hourly-

paid employee as well as the management and general supervision. I was first of all interested in the people I saw.

Insofar as management was concerned, the people I met could have been from America just as well as from Germany or France. The same slightly harried look on the face, the same lack of time, the same everything.

General supervision, in plants where we had a chance to talk at length, seemed to vary from excellent know-how to knowledge of routines only.

My impression of the average hourly-paid employee ranged from fair in Belgium, and to some extent in France to good and very good in Germany and England. In two plants each in Germany and England, the people impressed me with an air of friendliness and an air of willingness to work that would do credit to any American plant.

Handling of Material

In general one could say that we saw little use of conveyor systems as in American plants. We saw some use of self-powered trucks in the various plants, to move materials, but again their approach to this phase is behind American practices.

With the exception of German plants, which had been partially destroyed during World War II and rebuilt, there was little room behind print machines in most plants for the handling of large rolls of ingoing cloth to be printed. Therefore small rolls of cloth were handled with resulting print machine stops.

The German plants and others with room, have adopted the idea of handling large rolls of cloth at the print machines and calenders to avoid stops. These rolls were about five feet in diameter containing about 6,000 yards of cloth. We saw no automatic storage scays at print machines.

One plant in Switzerland had an ingenious device to transport marisettes in a delicate manner. They floated the cloth in a water-filled trough from one preparation to another to avoid pulling and distortion of the fabric.

Bleaching

In general one could say that the kier boil, rope, hypochlorite bleach is still predominant in most plants. In one plant, kier peroxide bleach was used and in two others peroxide bleach was used for special finishes.

For open width, plain shade dyeing we saw a scour, discontinuous peroxide or sodium chlorite bleach range. Some plants which had recently modernized their bleaching equipment still clung to the hypochlorite method.

Dyeing

We saw various dyeing ranges, some quite antique and a few excellent ones. A great deal of Algosol or Indigosol dyeing is done on cottons by the Europeans, and most of these ranges were run-down in appearance. However, they produce lovely work on fine combed sateens and broadcloths.

In England we saw a modern, simple and efficient naphthol dyeing range which would run at a speed of 80 to 100 yards per minute on 80x80 cotton or similar weight viscose fabrics. In Switzerland, we saw a modern, pad steamer range.

In general, however, the jig appeared to account for at least one-half of the plain dyeing work in most plants visited.

Printing and Engraving

We were looking for a comparison of European and American roller engraving. We found only one plant each in Germany and Switzerland which did work on an equal quality basis with American top quality pantograph on photo engraving. Other plants visited would be considered as only ordinary. In England we found top quality pantograph and photo engraving as well as excellent mill engraving in a large public engraving shop.

In Germany, Switzerland, France and England we saw some exquisite photo engraving for hand table screen printing.

We saw a wide variety of print machines, including French, English and German-made models. These are, in essence, the same as the American brand. We saw new print machines in operation which have push-button controls and pneumatically operated nips for pressure on each side of the print roller. One of these machines was running a close fit pattern and having trouble keeping in register.

Most print rollers we saw were chromium plated, as in America.

We saw the Stork automatic screen print machine in operation. This shows some promise for automatic screen print work to reduce labor cost.

In general, we saw nothing greatly different from an American roller print shop except that the print machines run much slower.

Finishing

The Europeans are specialists in finishing. They have obviously spent their first available money for modernization on new finishing ranges of pad, enclosed tenters, etc. and on curing ovens and calenders.

The durable, resin, Schreiner finish seemed to be the choice of the continent at the moment. Finishing, curing and calenders were run slower than equivalent American equipment would run. Button breakers were in use in some plants to give the resin-finished fabrics for ladies wear a still softer, more luxurious hand.

The management of each plant seemed most alert to the necessity of a first class finish for the fabric at hand, whether nylon, rayon, cotton; whether napped, smooth face, plissed or embossed. Where necessary, they run as little as 100 yards in a special finish in some plants.

We saw Sanforizers in only three plants on the tour. Apparently, the Sanforized trademark is not as well advertised in Europe and resins or other devices are used more for shrinkage control.

Miscellaneous

Of interest to me was the European practice of running cottons and various synthetic fabrics in the same plants, departments, and to some extent on the same machinery. Only one plant visited had really what one would consider a separate synthetic layout.

We found the same general demands and use for wash fast colors as now prevalent in America. Vats, naphthols, aniline blacks, pigments, developed and sulfur colors are used much as over here. I was told that even the African export trade demands the finest colors now.

Productivity

Ranging from the worst to the best, the plants visited would compare on a basis of about 1 to 4 to 1 to 2 with American man-hour production. This is due in part to the attitude of labor; to market conditions which dictate 2,000 yards per design printings and to difference in finishes and finishing machinery. In this respect, all managements are aware of this and are seeking more modern, labor-saving machinery.

Fortisan-36 Is Base For Laminated Fabric

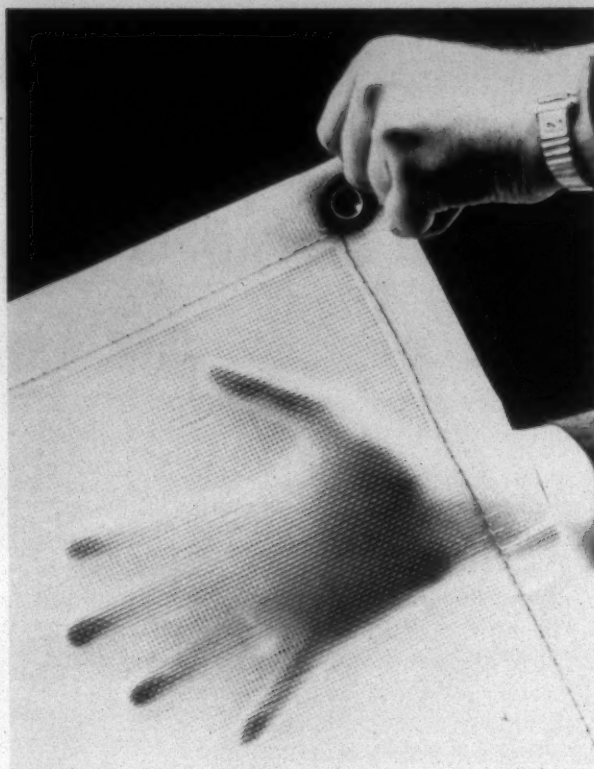
A new fabric for tarpaulins and similar protective coverings combines translucency with high strength, low weight, weather resistance and other advantages.

The new material, being introduced by Herculite Protective Fabrics Inc., Belleville, N. J., is made of loose mesh weave Fortisan-36 (Celanese high-strength rayon) laminated between two outer vinyl coatings. The vinyl is Bakelite Krene.

In addition to offering considerably greater strength and dimensional stability than natural fibers, Fortisan-36 is resistant to the sunlight degradation that attacks certain other fibers; thus, it makes practical a strong translucent tarpaulin-type fabric, as contrasted with the conventional opaque materials.

Among initial uses foreseen for the vinyl-laminated Fortisan-36 fabrics are linesmen's tents, hatch covers, portable repair shelters and numerous other coverings that permit light transmission while providing weather protection for various production, repair and maintenance operations. Frequent necessity for artificial light in such operations under conventional opaque fabrics may not only present complications and add costs, but can increase hazards of fire and explosion, in functions where volatiles are involved.

In addition to industrial potentialities, the Herculite com-



In close-up view, this Herculite tarpaulin reveals the loose mesh reinforcement of Fortisan-36, a new Celanese rayon, which provides great strength and dimensional stability to the Krene vinyl laminated material. Herculite can be converted to any size or shape and grommets, ropes or special fittings supplied to specification.

pany feels the new fabric has interesting characteristics for a number of consumer applications, notably in translucent awnings that would provide soft shade for intense sunlight without blotting out all light. For such a use as this, the vinyl can be provided in a variety of colors.

Exhibit To Perk Up Perkin Event

Considerable progress is being made in plans for the exhibits that will be a feature of the Perkin Centennial celebration at the Waldorf-Astoria Hotel, New York City, during the week of Sept. 10, commemorating the 100th anniversary of Sir William Henry Perkin's discovery of mauve, the first synthetic dye. Henry L. Young of the Interchemical Corp., chairman of the exhibits committee, reports enthusiastic response from members of the dye-producing industry to joint participation in the exhibit titled "A More Colorful World."

The exhibit will be historical and educational in nature and will depict the story of dyes, where they originated and what they mean to the national and industrial economy. The proposed plan features a number of integrated parts and illustrates the historical background of man's attempt to color materials with natural dyes. The scarcity and high cost of available dyes obtained from nature are pointed up and lead to the discovery of mauve by taking the visitor through the gateway to a more colorful world, showing a framed setting of William H. Perkin at work in his laboratory.

Suitable exhibits in a central gallery will demonstrate the properties of modern synthetics and their uses in the home, fashion and industry.

Control of Corrosion in Mill Air Conditioning Equipment

By J. STANLEY LIVINGSTONE, Livingstone Coating Corp., Charlotte, N. C.

The growing use of air conditioning equipment in textile mills has focussed attention on the prevention of corrosion of these valuable installations. This paper, presented recently at the Southeastern regional meeting of the National Association of Corrosion Engineers in Atlanta, Ga., presents some of the work done to date along these lines, with some thoughts for future work.

PROBABLY the basic reason for the rapidly expanding use of air conditioning in textile mills is the fact that textile fibers can best be processed when they contain a certain, definite amount of moisture, with a certain amount of moisture in the surrounding air. For warping, twisting and winding, most mills maintain relative humidities around 55 per cent and temperatures of around 82°F. In the weave rooms, higher humidities are usually maintained; for most synthetics, 60 to 65 per cent, and for cotton 80 to 85 per cent relative humidities are maintained.

Personnel comfort is also most important in the textile industry, since the heavy motor loads in the industry cause temperatures to rise over the 100°F. mark during the warm weather months.

Types of Air Conditioning Equipment

One popular type is known as the humiduct system which draws in fresh air through a blower system, exhausting this air through ports or ducts in the mill. In front of each port a spray nozzle controls the amount of moisture in the air. The temperature is regulated by heating or cooling coils in a central location and instrument controls throughout the plant maintain the proper temperature and humidity.

More and more mills are using and installing the central station type of equipment which draws in fresh air and also used air or return air, from the plant. The return air is laden with dirt, lint, fumes, etc., and the combination of fresh and return air is passed through baffles which tend to eliminate much of the dirt and foreign materials. It then passes through a washer room where a band of spray nozzles wash the air which is then drawn through another set of baffles into the central fan which will carry up to 500,000 c.f.m. per blower. The air is then passed through duct work to the various operating areas and the temperature and humidity controls are in the operating areas. The

discussion of corrosion is limited here to the central station type of equipment.

Causes of Corrosion

The major cause of corrosion is the handling of saturated air in the washers and fans. The high impact of this saturated air against the rotor, blades, housing, etc. with its contamination of lint, starch, size, etc., causes penetration of moisture and contaminants into crevices, cracks and pores. For any coating used, there is considerable abrasion in this service.

The starches, water conditioners, sizes, etc. which are used are widely varied and should be studied carefully when protective measures are being considered. Most of the sizing solutions are neutral in the size box, but this size, when combined with lint, adheres to various parts of the central station. When proper conditions exist, considerable bacteria growth takes place and produces a wide variation in pH, first to an acid condition of pH 2.5, and as the biochemical reaction continues, the pH will rise up to about 11. The clinging lint also produces oxygen-poor areas on the steel with resultant accelerated corrosion at these points.

Certain operations in textile mills, such as bleaching and dyeing, require the use of extremely corrosive chemicals involving a wide variety of acids, alkalis, oxidizing agents, dyes, etc. and these must be considered in any protective system for cooling and exhaust equipment used in these locations.

Too frequently, this equipment is fabricated with no thought to bimetallic corrosion and various types of steel, brass, aluminum, etc. are unwisely used together, causing galvanic corrosion. For example, aluminum baffles may be mounted in a carbon steel frame, using stainless steel nuts and bolts.

Another cause of corrosion occurs when the textile plant is located in an industrial atmosphere or located near the sea coast. These conditions accentuate normal corrosion rates and must be considered in any corrosion control program.

Until recently, little thought has been given to control of corrosion in air conditioning equipment. Frequently, new equipment has been installed with no other finish than a factory applied prime coat. Sometimes, the factory applied finish involves more than the prime coat but still has not been applied over a properly prepared surface and without reference to the type of service involved.

Maintenance in a textile mill presents many problems

since most mills operate on a three-shift basis at least five and usually six or seven days a week, and close down only one week per year, traditionally the week of July 4. During the annual shutdown, much maintenance of machinery, buildings, etc. is performed. A mill having two or three central stations, and some have ten or 20, will find it impossible to properly clean and coat more than two or three stations during a week's time.

Maintenance to date has usually consisted of rather minimum surface preparation using steam cleaning, power driven grinding tools, wire brushing or hand scraping. Steam cleaning seems to be the least satisfactory, due to the fact that it usually lifts old coatings and does not leave a clean surface. Hand scraping also is quite unsatisfactory for surface preparation. The life of most good coatings, including vinyls and neoprenes, is seriously shortened by the above mentioned inadequate surface preparations. Sand-blasting has proven to be the best method of surface preparation for new and corroded steel. However, it must be considered that the maximum working time for one central station will be 48 hours. Consequently, a white metal blast cannot be attained, but good results have been obtained with a commercial blast. This time limitation therefore, rules out coatings which require a white metal blast as surface preparation for units already in service.

During the 48-hour period, it is necessary to block all air ducts, return air vents and other openings to prevent dust and sand from contaminating nearby intricate spinning and weaving machinery. The area to be coated must be completely sandblasted, involving usually one to two thousand square feet. This operation, including clean-up, requires from 12 to 36 hours depending on condition and size of the equipment. The protective coating must be applied immediately thereafter. Consequently, for this type of maintenance, the coating selected must be fast drying and subsequent coats must be applied in rapid succession. Due to the design of this equipment, it is impossible to use thermosetting coatings. However, properly applied neoprene, vinyl epoxy and chlorinated rubber coatings have been used successfully. The newer zinc rich paints appear to be performing well where chemicals, starches, etc. are not present, such as in carding and spinning operations, and in weave rooms and dyehouses, the zinc rich paints form an excellent primer to be followed by epoxy or chlorinated rubber coatings for chemical resistance. The zinc prime coat prevents undercutting and rust creepage most effectively and increases the bond of the barrier coats. When coatings have been applied in this fashion, minimum annual maintenance should give good protection for at least four years.

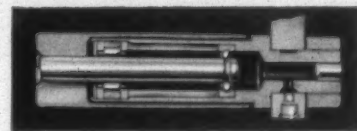
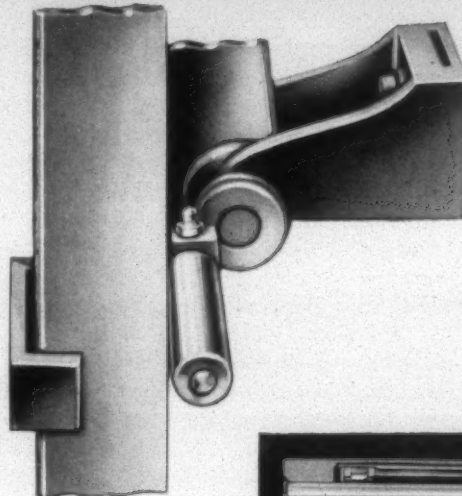
The above represents the best method of coating and maintenance, but present methods of maintenance include the application of all types of coating ranging from 20 weight motor oil, axle grease, various paints, to the finest vinyl and epoxy coating. With improper maintenance of this type, life of rotors has been as short as three years, and entire units may be replaced within three to ten years involving costs of \$8,000 to \$50,000 per unit. Obviously, corrosion control is mandatory.

Proposed Methods For Corrosion Control

For better corrosion control in the future, there are several avenues of approach. First, improved design engineering should play an important part, primarily for improv-

increase driving belt life
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Now you can eliminate the rapid wear of belts due to sliding on the fork guide. SKF Belt Guide Rollers not only save belts but also assure better regulation of the feed on Openers and Pickers, and bobbin speeds on Roving Frames.

The SKF Belt Guide Roller has both a roller bearing and ball bearing fitted in a sleeve, where the outer rings remain stationary. This prevents churning of the grease, and affords an ideal arrangement for good lubrication. As there are no separate inner rings, large, high-capacity bearings are used.

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ed maintenance. On some present-day equipment, there are no access hatches or doors to allow entrance to the fan for inspection and maintenance. The blades, intake cones and vanes are usually of lap joint construction which cause excessive corrosion between the layers of steel which cannot be properly cleaned and coated. Housings also are lap jointed, with bolted and riveted construction. If seams could be butt welded and ground smooth, or if lap joints could be welded closed and ground smooth they could be more easily cleaned and satisfactorily coated. As many bolts and rivets as possible should be eliminated since these are particularly susceptible to coating failure and corrosion.

The penthouses or small buildings that house the air conditioning equipment do not, as presently constructed, allow replacements parts to be installed in many cases and it is frequently necessary to knock down one wall in order to install a new fan rotor. Also, if various parts of the central station could be removed, by the installation of track, large doors, etc., cleaning and maintenance would be greatly simplified.

Finally, an improved protective coating system would be of great benefit. One important possibility is the metallizing of new equipment with zinc or aluminum, of at least five mils, with application of an inert seal coat. This work must be done prior to installation when the equipment is disassembled so that all areas are accessible for white metal blasting, metallizing and sealing. It is necessary, even with this system, to use an air curing or catalyzed coating since it would be impractical to cure thermosetting coatings at relatively high temperatures. With this system care must be taken not to throw the wheel out of balance. Also, the cost

of this type of protection must be considered, which will run at least 100 per cent higher than conventional coating systems. However, it is felt that the metallizing should last almost indefinitely, provided the seal coat is maintained in good condition.

If the metallized system is economically unfeasible, certainly all new equipment should be sandblasted and coated with a protective coating. Although vinyl coatings offer excellent chemical resistance, adhesion is a great problem, and when a vinyl coating system begins to fail, repair is extremely difficult. If spot areas are recoated, great care must be taken to feather edges of broken spots, and these edges will remain a weak point in the system and will undoubtedly be future trouble spots. If the entire coating is removed, great difficulty will be encountered in blasting off those parts of the coating which are well adhered. Vinyl coatings are also subject to extreme undercutting of rust, and frequently, although they appear to be in good condition, large areas can be stripped off in sheets revealing corroded areas under the coating film.

The newer epoxy coatings have better adhesion than the vinyls, with less tendency to undercutting. However, certain formulations seem to be quite brittle and they have not been in service long enough to give concrete results.

The zinc rich paints appear, at this time, to offer the best solution to undercutting of corrosion and when overcoated with inert coatings should offer the most economical long-range corrosion protection for cold spray applied coatings.

In conclusion, much remains to be done in the prevention of corrosion control of air conditioning central stations. We feel, however, that proper coating of the original installation with sensible maintenance is well worth the original investment required.

Magnets Remove Rust Particles From Dry or Liquid Starch Lines

A large Southern concern has found that a troublesome problem presented by the occasional presence of minute rust particles concealed in the liquid warp size mixture, or in the dry starch, can be overcome—and the elements of human error largely removed—by the use of modern permanent magnetic separators. The firm has installed two Eriez Model B. Ferrotraps (pipeline traps) in its liquid starch lines, between the mixing kettles and the homogenizers, and one Eriez Model D-1 drawer-type grate magnet to sift the dry starch as it comes to the dry starch weight lorry.

As reported by the plant engineer, the Eriez units are removing small rust particles from the starch, protecting the homogenizers and rubber slasher rolls from damage and safeguarding the firm's customer good-will by preventing rust spots from developing in finished cloth.

Produced by Eriez Mfg. Co., Erie, Pa., both types of magnetic separators are recent scientific developments of the tremendously powerful Alnico V magnetic elements



A worker in a large Southern plant removes an Eriez D-1 drawer-type grate magnet so that rust particles may be wiped off the magnetic tubes. This Eriez permanent non-electric magnetic separator has been installed to sift the dry starch as it comes to the dry starch weight lorry.



One of the two Eriez permanent magnetic Model B Ferrotraps installed between the mixing kettles and homogenizers in the liquid starch lines. These Ferrotraps (pipeline traps) are protecting the homogenizers and rubber slasher rolls from damage caused by rust particles in the starch, and preventing rust spots from developing in finished cloth. Accumulated rust particles adhering to the magnetic "fingers" in the Ferrotrap are periodically removed by easily withdrawing the one-piece magnetic assembly from casing and wiping the rods clean.

applied to industry problems involving ferrous contamination.

The Eriez Model B Ferrotrap, as installed in the liquid starch lines, consists essentially of a stainless steel casing within which multiple stainless steel rods or "fingers" containing the non-electric magnetic elements are so positioned that the flow of liquid is forced to curve and recurve around and through them, thereby more readily exposing any bits of rust particles or other iron contamination to the ultra-powerful magnetic fields emanating from each of the rods. Accumulations of metal, adhering firmly to the rods, are periodically removed by simply withdrawing the one-piece magnetic assembly from its casing and wiping the rods clean.

A similar function is performed for this company by an Eriez grate magnet, handling dry starch. This unit consists of a series of parallel stainless steel tubes, each containing magnetic elements of Alnico V and mounted one inch apart in a rugged steel frame. This magnetic assembly is protected by a removable steel grill which also serves to slow the material and direct it in thin, multiple flows over the magnetic tubes. To remove metal accumulations, the drawer-type frame is slid back, the grill lifted off, and the rods wiped clean.

Installation of these Eriez units in existing equipment is very simply and quickly effected. No wiring is needed by these self-powered, permanent magnetic separators, nor is any maintenance required other than periodic removal of iron fines or tramp metal. The tremendous magnetic "pull" of the Alnico V elements is virtually inexhaustible, and is guaranteed indefinitely by the manufacturer.

Promotions, Resignations, Honors,
Transfers, Appointments, Elections,
Civic and Associational Activities

PERSONAL NEWS

C. Perry Clanton Jr. has been named sales manager of textile products for the Pneumafil Corp., Charlotte, N. C. Mr. Clanton, a resident of Spartanburg, S. C., and a graduate of Clemson College, was sales engineer in the state of South Carolina for the company prior to his promotion. Before



C. Perry Clanton



Edward J. Williams

joining Pneumafil in June of last year, he had been associated with Saco-Lowell Shops for some six years in sales and with Reeves Bros. Inc. in textile production for 2½

years. . . . Named to succeed Mr. Clanton as sales engineer for the company's South Carolina territory is Edward J. Williams, formerly an engineering draftsman. A native of Monroe, N. C., Mr. Williams attended the University of Alabama and is a graduate of Wake Forest College. He will make his headquarters in Spartanburg.

Emmett Morrison Jr. has been named acting superintendent of the Flint No. 2 Plant, Burlington Industries, Gastonia, N. C. He will be in charge for several months while James C. Sproull, superintendent, is convalescing from a heart attack he suffered May 30. Mr. Morrison joined Burlington at Cramerton, N. C., in June 1953.

George W. Mallory, sales representative in the Charlotte, N. C., office of Foster Machine Co., was recently inducted into the company's 25-Year Club at the firm's ninth annual meeting and dinner. He was pre-

sented a pearl award by W. C. Chisholm, Foster president and treasurer, in recognition of his service.

Norman Elsas has resigned as vice-president and a director of Fulton Bag & Cotton Mills, Atlanta, Ga., to devote full time to Nemo Industries Inc., a new firm which he heads. Mr. Elsas has invented a camera used for photographing pick clocks and hank clocks on looms and frames, a machine for the preparation of sizing materials and adhesives and several other items the firm will market. He is a past member of the board of governors, American Cotton Manufacturers Institute; and past president and board member, Cotton Manufacturers Association of Georgia.

P. S. Leach, superintendent of Consolidated Textile Co. Inc., Lynchburg, Va., has been named manager of the company's Lynchburg Division. Mr. Leach, who has

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AND
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PERSONAL NEWS

been with the company since 1948, is a native of Newnan, Ga. He received his B. S. degree from Georgia Tech in 1932 and his M. S. from Illinois University in 1948. Prior to joining Consolidated, he had been with Bibb Mfg. Co., Dan River Mills and the technical division of the U. S. Conciliation Service. He was named assistant superintendent at Lynchburg in 1951 and superintendent in 1954. He is a former member of the board of governors of the Southern Textile Association, and a former member of the board of governors of Textile Quality Control Association.

William J. McFadden, production control director at The Fletcher Works, Philadelphia, Pa., has been named production manager of the plant. He has been with the firm since 1933. In his new position, he will work under Robert Scholes, vice-president in charge of production, in streamlining and reorganizing the Fletcher plant under a program that is expected to cost in excess of \$200,000.

A. Carl Martin Jr. has been appointed staple products sales manager of Celanese Corp. of America. A member of the Celanese organization since 1946, Mr. Martin has directed various sales programs involving acetate and viscose staple fibers, acetate spun yarns and viscose filament yarns. Most recently he had been manager of textile sales development. In his new capacity, he will

have charge of sales of acetate and Arnel staple and tow, rayon tow and spun yarns.

Succeeding Mr. Martin in textile sales development is Laurence T. Gerrity, who has served the company since September 1955 as New York district textile sales manager. A native of Pelham, N. Y., Mr. Gerrity has been with Celanese since 1945.

Dr. William L. Evers has been appointed assistant manager of fiber research. Dr. Evers has been with the company since 1951.



Charles W. White

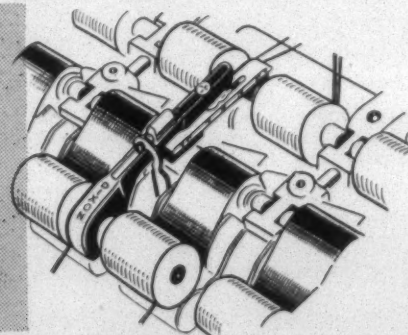
Charles W. White has been appointed director of sales of Sonoco Products Co., Hartsville, S. C. Mr. White has been associated with Talon Inc. for about 25 years, most of that time having been spent in sales and sales management.

He was formerly Eastern regional sales manager and more recently special assistant to the sales manager of Talon. A native of Dunkirk, N. Y., and a graduate of Allegheny College, Mr. White will make his headquarters in Hartsville where he will be responsible for all sales and marketing activities under the direction of C. H. Campbell, vice-president in charge of sales for Sonoco. Mr. White succeeds the late W. H. Miller.

William H. Ruffin, president of Erwin Mills Inc., Durham, N. C., was one of 12

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Northern Sales: William R. Fox, P. O. Box 380, Providence, R. I.

Durham civic leaders honored last month by the Durham City Council for their contributions to recreation in that city. He was presented a certificate of appreciation from the National Recreation Association. . . . Chauncey W. Lever of Anderson, S. C., director of public relations for The Abney Mills and Erwin Mills, has been named by the American Public Relations Association to serve as chairman of a drive being put on by the association to encourage the development of public relations departments in Southern industry.

Bert W. Ahrens has been appointed technical sales representative of the technical products division of E. F. Drew & Co. Inc. A graduate of New York University, he has been with Apex Chemical Co., Newark, N. J., in a technical sales capacity for the past 13 years.

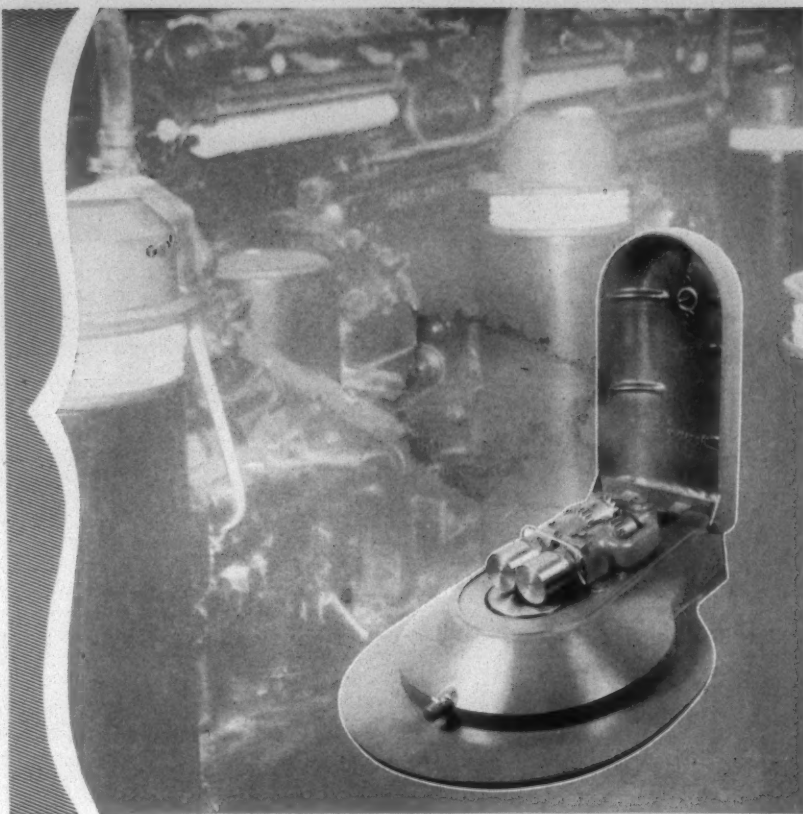
William B. Croxton, formerly with Amerotron Corp. in Aberdeen, N. C., has joined the Cramerton Division of Burlington Mills Corp., a division of Burlington Industries, as group manager of the Cramerton plants. He succeeds William F. Gaston, who is resigning Aug. 1 for reasons of health. Mr. Croxton has been with Amerotron and the former Robbins Mills in Aberdeen for the past three years in the capacity of manager of the technical and quality control department of the synthetics division. Prior to that he was with Frank Ix & Sons, Cornelius, N. C.; LaConcordia, Mexico City; and Dan River Mills, Danville, Va. A native of Kershaw, S. C., he is a graduate of Clemson College. . . . Mr. Gaston joined Burlington's Cramerton operations in 1940, and has served since 1952 as group manager of the two plants. He is a native of Belmont, N. C., and a graduate of the North Carolina State College School of Textiles. Before joining Burlington, he worked for several years with Aberfoyle Mfg. Co. in Belmont.



Norman H. Nuttall

Norman Nuttall has rejoined Stein, Hall & Co. Inc. as manager of its Charlotte, N.C., sales branch, succeeding Frank Perry, who was recently appointed manager of the company's domestic starch department. Mr. Nuttall, who has been with the Hubinger Co. since 1954, first joined Stein, Hall at Charlotte as a chemist in 1940. From 1950 until 1954 he was manager of the firm's paper mills department in New York. Other posts he has held with the company include assistant technical director, manager of the textile department and technical sales representative. A graduate of the Citadel in 1938, Mr. Nuttall has also served in several Southern textile mills and with the Ciba Co. in New York City.

David G. Foulk has been named assistant vice-president in charge of the newly-formed operations control division of Commercial Factors Corp., New York, N. Y. Organization of the new division is designed to effect improvements and economies in the company's internal operations. . . . Arthur



SOUTHERN STATES COILER HEADS MAKE CONVERSION TO LARGER CANS A SELF-PAYING PROPOSITION

Every mill man with an eye for ways to cut card room operating costs knows the advantages of larger cans. But what some don't realize is that Southern States conversions are so economical that they pay for themselves—a fact proved by case histories of mills throughout the country.

The Southern States Universal Coiler Head, illustrated above, is designed for either 14- or 15-inch cans. It is adaptable to any make of coiler. Using this head, intermediate gearing, coiler base and *your existing stand*, an inexpensive installation can be made in your mill.

Then you can enjoy all of these advantages: simplified oiling; ease of maintenance; smaller parts inventory; more efficient handling; lower operating costs; and improved quality. The photograph shows the simplified design of this head. Notice the streamlined cover and bonnet. Cut tooth gears and oilite bearings are used throughout. It is precision built for years of satisfactory service.

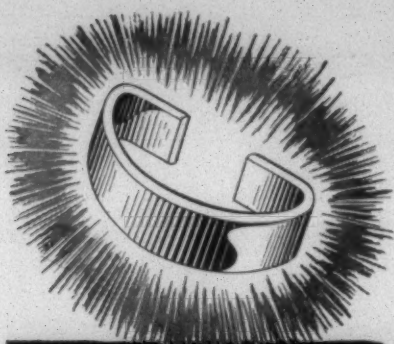
Get full facts from your Southern States representative, or send your request direct to the home office for a quick reply.



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JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S. C.

PERSONAL NEWS

L. Karmiohl has been named director of research and development for the company. His appointment is in line with the firm's expanded service in the field of market study for clients in the textile industry. In his new position he will continue to direct the company's advertising and public relations programs.

Henry F. Welfare has been appointed special representative in the textile department of International Business Machines Corp. He was formerly a sales representative for the company in Winston-Salem, N. C. In his new post, he will make his headquarters in Charlotte, N. C., and will co-ordinate sales activities and planning of applications of I.B.M. equipment to meet the needs of companies in the textile field.

Robert A. Harris, secretary and treasurer of Fieldcrest Mills Inc., has been named vice-president in charge of manufacturing for the company. Mr. Harris joined Fieldcrest in 1946. He was named secretary and treasurer in May 1955, and will continue in that capacity. As vice-president in charge of manufacturing, he succeeds E. W. Medbery, who resigned. . . . J. H. Ripple, manager of the blanket and sheeting plants, was honored last month upon completion of 35 years of continuous service with the company. He first joined the company at the towel mill in 1921. He was named manager of the towel mill in 1940, and

was promoted to manager of the blanket and sheeting mills in September 1949. . . . Marvin A. Law has joined the company to co-ordinate and expedite mill and staff functions in the development and styling of Fieldcrest domestics. A graduate of the North Carolina State College School of Textiles, Mr. Law has been associated with Burlington Industries and Cone Mills Corp. Immediately before joining Fieldcrest, he was manager of Cone's synthetic division.



Norman A. Cocke Jr.

Norman A. Cocke Jr. has been promoted to manager of rayon filament sales for American Viscose Corp. with headquarters in the company's New York office. Mr. Cocke, who has been manager of the corporation's Charlotte, N. C., district sales office, succeeds Malcolm V. Macfarlan, recently named field sales manager of the acetate and rayon branch sales offices and the New York office. Mr. Cocke has been with American Viscose since 1939, when he joined the Charlotte office as a salesman. He was made assistant manager of that office in 1952 and district sales manager the following year. A native of Charlotte, he is a graduate of the Massachusetts Institute of Technology. . . . Succeeding Mr. Cocke in the Charlotte office is J. Reid Durbin, assistant manager and head of the staple and

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tow division at Charlotte. Mr. Durbin, a native of Dawson, Pa., has been with American Viscose since 1946. Before moving to Charlotte in 1953, he was with the staple sales division in the New York office.

Charles S. Baker III has been named special representative in the Charlotte, N. C., sales territory for the chemical division of Goodyear Tire & Rubber Co., Akron, Ohio. He succeeds Gordon H. Campbell, who has been named assistant manager of the company's coating department. . . . Ted M. Kersker has been named manager of fabric development for all tire divisions of the company. Formerly chief textile engineer, Mr. Kersker is responsible for the quality of textiles and adhesives used in tires produced by the company, and for the development of new adhesives, textiles and processes.

G. David McGill has been named to the newly-created post of Southern product manager for Steel Heddle Mfg. Co., Philadelphia, Pa. Mr. McGill will work from the company's Southern Shuttles Division at Paris, near Greenville, S. C. . . . Richard B. Stevens has been named acting district manager in the company's Greensboro, N. C., office following the resignation of Ralph L. Parker. . . . Hugh I. Cash has been transferred to the Greensboro office from Greenville, S. C. . . . Everett M. Lail has been appointed sales engineer and will cover the territory formerly handled by Mr. Cash.

Albert C. Littlejohn has been promoted to assistant district manager of the Cincinnati, Ohio, office of the industrial division of Armstrong Cork Co. Mr. Littlejohn joined Armstrong in 1947 as a sales trainee and has specialized in sales to the textile industry at Armstrong's Greenville, S. C., office. He is a graduate of Clemson College.

Ray E. Smith has been appointed technical representative of Mona Industries Inc., Paterson, N. J. Mr. Smith will handle the demonstration work and technical service in conjunction with Mona's line of textile chemicals. He holds M. S. and B. S. degrees in organic chemistry, and has had wide experience in the field from previous associations with the Aquex Development and Sales Corp., Onyx Oil & Chemical Co. and the textile research division of the American Viscose Corp.

L. F. Shattuck has been named sales representative in Atlanta, Ga., for Alvey Conveyor Mfg. Co., St. Louis, Mo. Mr. Shattuck has had extensive and varied packaging experience covering a period of more than 30 years. He was associated with the Standard-Knapp Division of Emhart Mfg. Co. for 11 years, where he became general sales manager. Prior to that he was with the H. J. Heinz Co. for 15 years as production manager and maintenance supervisor; and with American Can Co. as service engineer for five years.

Thomas W. Estes has resigned as a director and a member of the executive committee of J. P. Stevens & Co. Inc. Mr. Estes joined Stevens in 1930 as head of finished cotton goods sales, and has long served as a director and one of its top sales executives. He retired last April 30 as executive vice-

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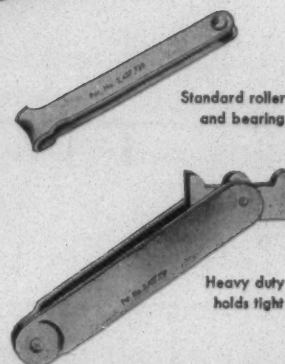
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PERSONAL NEWS

president of the company. He will continue to be available to the company as a consultant.

William H. Kendall has been assigned as a sales representative to the Charlotte, N. C., district of Allis-Chalmers Industries Group. A 1952 mechanical engineering graduate of North Carolina State College, Mr. Kendall recently completed the Allis-Chalmers training course for graduate engineers.

Abraham S. Endler, research and development chemist at Hart Products Corp., New York City, received his Ph.D. degree in chemistry last month from the Polytechnic Institute of Brooklyn.

Dame S. Hamby, associate professor in the department of fiber and yarn technology, School of Textiles, North Carolina State College, Raleigh, has been awarded the first Burlington Industries professorship. Mr. Hamby, a member of the school's faculty since 1948, now will serve as supervisor of the quality control division of the department.

Robert C. Edwards, former general manager and treasurer of Abbeville (S. C.) Mills Corp., has joined Clemson College as vice-president in charge of development, a new post. Mr. Edwards, a 1933 Clemson graduate, will co-ordinate all planning concerning development of the school, public and alumni relations programs, sponsored research activities and fund raising.

Howard B. Jackson, merchandising manager, and Paul Mauney, purchasing agent in charge of yarn buying for the Neisler Division of Massachusetts Mohair Plush Co., Kings Mountain, N. C., have been relieved of their duties. Clarence Flowers has been named to succeed Mr. Jackson, and Percy F. Dilling succeeds Mr. Mauney. Messrs. Jackson and Mauney were with Neisler Mills, Inc. prior to the company's sale last year to Horvath Inc., New York City, parent organization of Massachusetts Mohair Plush.

John K. Cauthen, executive vice-president of the South Carolina Textile Manufacturers Association, has been named honorary state chairman of the South Carolina Tuberculosis Association.

Herbert W. Patrick has been appointed head of the testing equipment service department of the Uster Corp., Charlotte, N. C. Mr. Patrick attended North Carolina State College prior to joining Uster some two years ago.

Ralph L. Parker of Greensboro, N. C., formerly with Steel Heddle Mfg. Co., has joined the sales force of Texize Chemicals Inc. He will represent Texize out of Greensboro.

Dr. Norman C. Armitage, a vice-president of Deering Milliken Research Corp., Pendleton, S. C., has been named to the U. S. Olympic fencing team to represent the U. S. at Melbourne, Australia. It is the sixth Olympic team berth for Dr. Armitage. He

was a member of the fencing teams in 1928, 1932, 1936, 1948 and 1952. He was named to the 1940 and 1944 teams, but there were no games due to the war.



Fred Tattersall

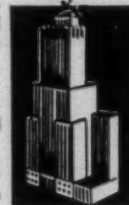
Fred Tattersall has been named manager of the American system worsted and sales division of Whitin Machine Works, Whitinsville, Mass. He succeeds J. H. Bolton Jr., who was recently elected vice-president liaison, sales.

A member of Whitin's engineering department for many years, Mr. Tattersall in 1948 was transferred to the sales department. Since that time, he has called on the worsted industry extensively and has been closely associated with the development of American system equipment. . . . Elijah Kent Swift, chairman of the board, Whitin Machine Works, was awarded an honorary degree of doctor of humane letters last month at the commencement exercises at Williams College, Williamstown, Mass. Mr. Swift graduated from Williams in the Class of 1900.

James F. Adams Jr. has been named general manager of technical service in the technical service department of Solvay Process Division, Allied Chemical & Dye Corp. A graduate of Syracuse University,

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Mr. Adams joined Solvay in 1939 as a chemical engineer. Prior to his present appointment, he had been manager of product section in the technical service department. . . . Norman C. Weil has been named technical advisor in the department. Mr. Weil joined Solvay in 1924 as a research chemist, and was transferred to technical service in 1929.

Burke M. McConnell has resigned as executive vice-president and a director of Amerotron Corp. Mr. McConnell was formerly vice-president of Textron Inc., and earlier had been vice-president of Burlington Industries. Robert L. Huffines Jr., Amerotron president, said that no successor would be named.

named president of the firm last January. His widow and three children survive.

Jake B. Kennington Sr., owner of Textile Apron Co. of La Grange and East Point, Ga., died recently. Survivors include his widow, a son, five sisters and a brother.

John G. Sayers, 74, retired textile official, died recently at his home in Columbia, S. C. Mr. Sayers was for a number of years associated with Callaway Mills Co., La Grange, Ga. Later he joined Pacific Mills at Columbia and was a member of the board of directors at the time of his retirement. Surviving are four daughters, two sons and two brothers.

George E. Spofford Sr., 86, retired textile official, died last month in Pawtucket, R. I. Mr. Spofford began his textile career in New England as an apprentice weaver. A little over 40 years ago, W. H. Langley & Co., which controlled the Aiken, Langley and Seminole Mills in South Carolina, named him vice-president and general manager of the three mills. Some time later Langley purchased the Anderson (S. C.) Cotton Mills, and these mills also came under Mr. Spofford's supervision. In 1924 he was named president of all the Langley mills in South Carolina. He returned to New England in 1929 as manager of New England Industries Inc., now Bates Mfg. Co. He retired in 1945.

OBITUARIES

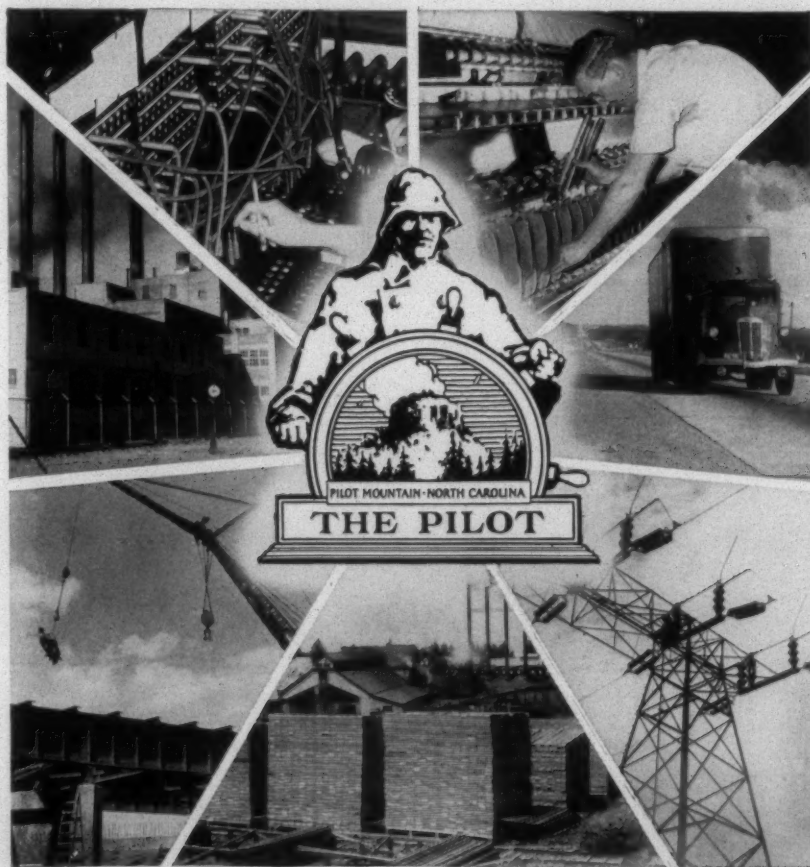
Laura Page Adams, 72, former president of the old Ruby Cotton Mill, Gastonia, N. C., died recently. Mrs. Adams was the widow of one of the mill's founders. Following her husband's death, she took over management of the business and was reported to be the first woman to head a cotton mill. She retired some 20 years ago and had made her home in Silver Spring, Md. Surviving are two brothers and two sisters.

Marion Brawley, 74, retired textile executive of Greenville, S. C., died last month in Greenville. Mr. Brawley was associated with Parker Cotton Mills before World War I and later with F. W. Poe Mfg. Co. and Nuckasee Mfg. Co. He is survived by a daughter, two sons and a sister.

Roy Cooper Baker Jr., 48, chief engineer for the P. H. Hanes Knitting Co., Winston-Salem, N. C., died recently. Mr. Baker had been with Hanes six years. Prior to that he was with the Werthan Bag Corp., Nashville, Tenn.

Joseph B. Ely, 75, last president of the former American Woolen Co., died last month at his home in Westfield, Mass. One-time governor of Massachusetts, Mr. Ely was named president of American Woolen in May 1954. Following American Woolen's three-way merger with Robbins Mills and Textron Inc., he became chairman of the executive committee of Textron American Inc. A widower, he leaves a son, a brother and a sister.

Llewellyn P. Haden, 41, president of Charlottesville (Va.) Woolen Mills Inc., died July 3 of a heart attack in Charlottesville. Mr. Haden, whose family owns a minority stock interest in the company, was



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MILL NEWS

ST. STEPHEN, S. C.—Albany Felt Co. has begun operations in its new \$2½ million plant here. The plant, which produces paper machine felts, occupies 100,000 square feet and is totally enclosed except for the office area. All of the woolen manufacturing operations, including wool blending, carding, spinning, weaving and finishing, will be performed at the plant, whose output is expected to increase the company's paper machine felt capacity by about 20 per cent.

LAURINBURG, N. C.—The weaving division of Waverly Mills Inc., here, is being partially converted for the production of cotton corduroy. The bulk of the division's production will be on the new fabric by Fall, it is reported.

LINCOLNTON, N. C.—The Duplan Corp. has announced that it will close its Lincolnton Division permanently after operations now being performed here have been transferred to other throwing plants of the company. According to George Friedlander, Duplan president, the move is in keeping with the firm's current program of consolidation.

STARTEX, S. C.—The Startex Division of Spartan Mills has announced plans for the construction of a three-story warehouse adjacent to the present warehouse facilities of the bleachery and sewing room. The new warehouse will contain some 87,000 square feet of floor space, and will more than triple the space currently available.

ENKA, N. C.—American Enka Corp. has reorganized technical and production functions of its plant here on a two-operation basis, rayon and nylon, with five staff departments serving both operations. Plant Manager E. M. Salley Jr. said the objective of the new plan of organization is to separate rayon and nylon operations so that one manager will be responsible for planning and administering all production func-

tions, including quality control, for each product. Dr. W. J. D. Van Dobbenburgh has been appointed rayon operation manager and Paul W. Markwood has been named nylon operation manager. P. H. Van Scherpenzeel and Dr. R. L. Parks will serve respectively as rayon chief chemist and nylon chief chemist.

GOLDSBORO, N. C.—A new firm established to manufacture cotton mop yarn from spinning mill waste has been granted a state charter of incorporation. According to W. A. J. Peacock, president and treasurer of the company, to be known as Peacock Textiles Inc., the plant will employ 35 to 40 persons at peak production, and will turn out about two million pounds of yarn a year. Mr. Peacock is former vice-president of Borden Mfg. Co., here.

RABUN GAP, GA.—James Lees & Sons Co. has awarded construction contract for its new multi-million dollar tufting mill here. No estimated cost on the new mill has been announced, but the building covered in the contract will contain 144,000 square feet. William J. Jarrett, formerly manager of the firm's home plant at Bridgeport, Pa., has been named manager of the new facility. Lees recently announced a \$6 million expansion plan which will include doubling the size of its first Georgia subsidiary, the Pine Tree Co., at Dahlonega.

NEW ORLEANS, LA.—Lane Cotton Mills Co. celebrated its 100th anniversary here this month. The firm was founded in 1956 by Napoleon LaFayette Lane. Beginning with 5,000 spindles, the company now has about 41,000 spindles and some 1,362 looms. The plant was headed by S. Odenheimer for 60 years. Following his death in 1945, he was succeeded by his son, J. Freyhan, who held the office of president until 1949. In 1946, Lane was purchased by Railway Supply & Mfg. Co. It changed hands again in 1948 when it was acquired by M. Lowenstein & Sons.

GREENVILLE, S. C.—Camperdown Co. Inc., producer of carded ginghams and coarse colored goods, is going out of business. Closing of the plant, which employed some 250 workers, has been attributed to increased imports of Japanese ginghams by Sydney Bruce, president and treasurer of the firm. "With the ever-increasing volume of imports of Japanese ginghams to this country, the market for carded gingham has substantially disappeared," he said. He stated that the company has been operating at a loss for the past two years and inventories of finished goods had grown to alarming proportions.

CONOVER, N. C.—Through an exchange of stock, Warlong Glove Mfg. Co., here, has joined Riegel Textile Corp., according to a joint announcement by W. E. Reid, Riegel president, and A. L. Shuford Sr., head of Warlong. All of the management and operating personnel will be retained, it is said, and the local plant will become the

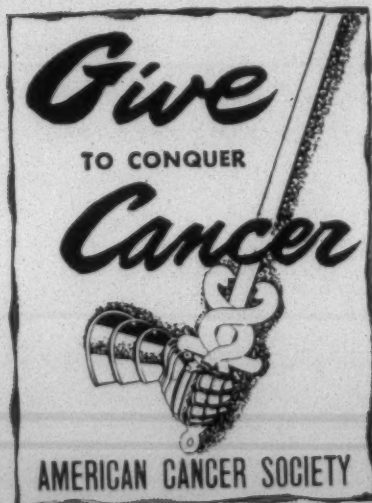
headquarters of the glove division of Riegel. G. L. McCartha, vice-president in charge of Riegel's glove division, will maintain division headquarters here. Adrian Shuford Jr. will remain at Warlong as general manager of the plant, and Mr. Shuford Sr. will serve as a consultant and advisor.

THOMASTON, GA.—Thomaston Mills has awarded construction contracts on an addition to the main building of the Peerless Division here. The addition will extend approximately 150 feet, and will be three stories high. It is the first stage of a complete modernization program for the Peerless Division. The complete program will require about two years, it is said.

KINGS MOUNTAIN, N. C.—The Pauline Plant of the Neisler Mills Division of Massachusetts Mohair Plush Co., here, is being stripped of machinery and will be outfitted with 60 looms for the manufacture of top quality pile fabrics. W. M. Ford, general manager, has announced. Looms to be installed will be the double-shuttle type, he said, to permit manufacture of pile and backing in one operation. Some of the new type looms will be new, others only slightly used. Some 70 of the 130 looms now in the plant will be transferred to other plants, with the remainder to be junked. The project is expected to be completed in about 90 days.

BETHUNE, S. C.—The Kendall Co. has begun initial operations in its new \$8 million finishing plant here. The one-story plant occupies 321,000 square feet and features an unbroken U-shaped production line from greige storage to the finished goods shipping area, and an extensive air-change, air-wash system for manufacturing areas to control humidity for both production efficiency and employee comfort. C. Allen Gove, formerly controller of Kendall's Cotton Mills Division, is resident plant manager. Goods to be finished at the new operation include diaper cloth, print cloth and sheeting. Some 250 employees will be required at peak production.

PAW CREEK, N. C.—The Kendall Co. has announced that it plans to shut down spinning and weaving operations at its Thrift Plant here by mid-October in preparation for sale or liquidation of the plant. The plant employs 320 people and has been operating 34,000 spindles and 700 looms. According to H. K. Hallett, Kendall vice-president, the action is attributed to the changing demand for fabrics needed in the integrated operations of the company, and the inability of the Thrift Plant to meet these requirements. The announcement confirmed widespread rumors that the plant would be closed. Efforts have been made to sell the plant to a purchaser who would continue textile operations, Mr. Hallett pointed out, and these efforts will continue. In addition to the Thrift Plant, which produces gauze and tobacco cloth, Kendall operates seven other mills in South Carolina and Alabama.



Seminar Held By American Viscose

Representatives of ten of the nation's leading textile schools heard about the latest developments in rayon, acetate and other man-made fibers when they attended American Viscose Corp.'s fourth seminar for textile institute faculties recently at Marcus Hook, Pa.

Held at the corporation's textile research department in Marcus Hook on June 18, 19 and 20, the seminar also covered the newest finishing and processing techniques. In addition, various divisions in the department held special demonstrations for the approximately 40 faculty members in attendance, and staff members were available for private conferences on specific subjects of interest.

A talk on "wash and wear" by Irving H. Welch of the dyeing and finishing division was the first topic on the program, following greetings by Graeme G. Whytlaw, assistant director of the textile research department. Em-

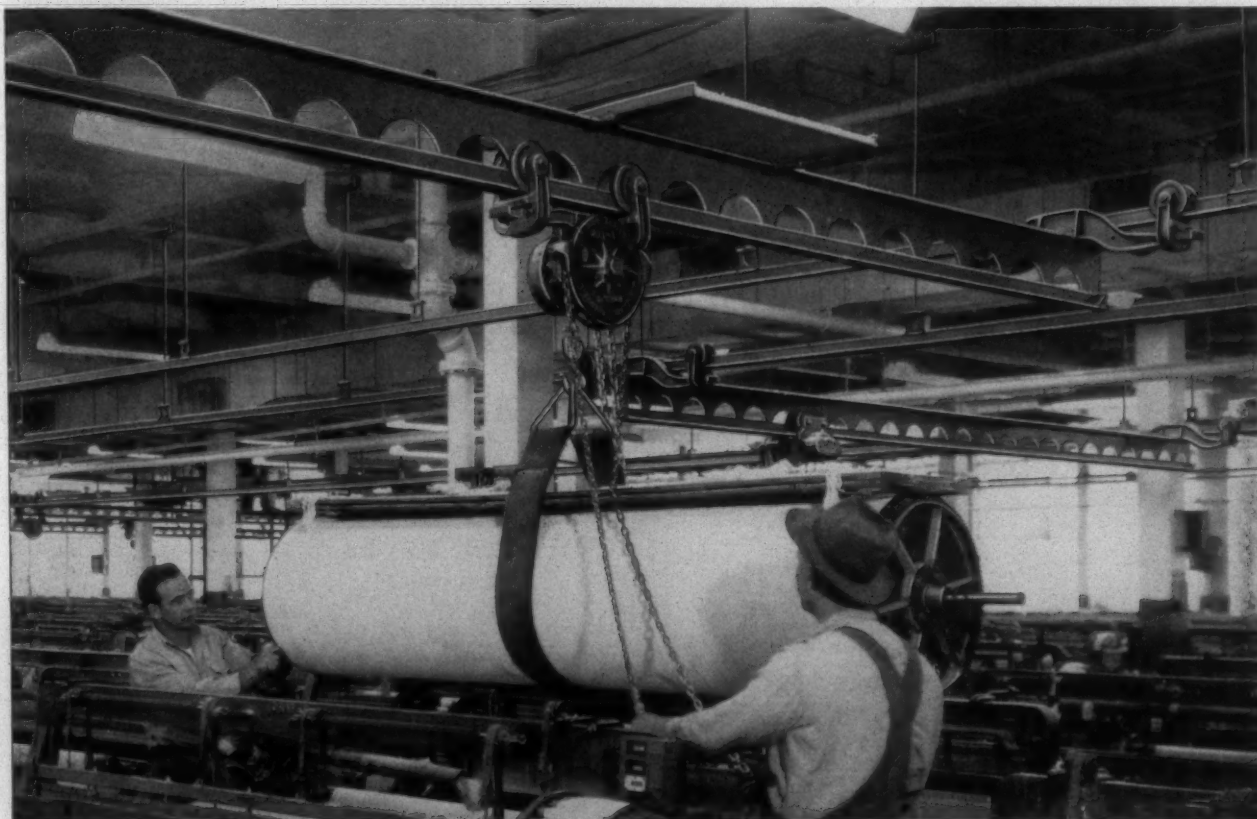
phasizing the advantages to be gained through Avcozet formulations, Mr. Welch spoke on chlorine resistance, strength retention, non-fibrillation and ease of care.

The problems and solutions in tufted carpeting were discussed by four men from the staple technical sales division. Those who spoke included Warren Simons, William Stavers, Ralph Stimmel and Kenneth Whitney.

The current stimulation of interest in non-wovens was highlighted by Howard E. Shearer of the industrial division. Mr. Shearer outlined the history and growth of the industry and described materials, processes, uses and marketing of non-wovens.

Other subjects dwelt upon during the first day were: "Testing Fiber Friction," by Joseph A. Truitt, mechanical development branch; "Trade and Laboratory Tufting Procedures," by Ronald Repoe, weaving division; "The Lindly Yarn Inspector," by Robert D. Heffelfinger, mechanical

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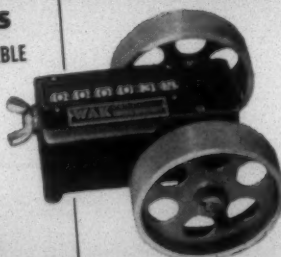
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development branch; and "Present Dyeing Procedures for Rayons and Acetates," by Jackson A. Woodruff, dyeing and finishing division.

Rayon's tremendous versatility was pointed up at the second day's meeting by Richard MacHenry of the industrial division, who told of the use of the fiber in absorbent staple, in belting and tire yarn, as backing on film, in book cloth, non-woven ribbon and pressure sensitive tape, in yarn reinforced paper, and in numerous other products.

The excellent characteristics which make super-strength rayon especially good for the tire trade were outlined by Arthur B. Baker of tire yarn industrial sales. Its heat resistance, strength, resilience and excellent fatigue life were particularly stressed.

Information given on rayon and cotton blends drew considerable questioning from the floor. This phase of the seminar was conducted by Warren Simons, who spoke on spinning, Rene Bouvet, head of the textile development branch, who spoke on blends in fabrics, and Irving H. Welch, who spoke on finishing.

Demonstrations in the various divisions were conducted during the afternoon session, which provided time for tours throughout the department. Following, there was the presentation of a paper by Leslie L. Walmsley of the dyeing and finishing division on the application of solution dyed yarns. Comparison was made of solution dyeing versus dyeing in filament rayon and staple viscose, and explanation was given of the adaptability of solution dye to the American market.

Of particular interest was the story of nylon-acetate tricot fibers, presented by John M. Roughan, head of the consumer division, during the last day's conclave. The use of these fabrics in contour sheets was especially noted as was home laundering and wear testing.

Advances in warping of filament rayon were outlined by G. William Byers, weaving division, who indicated the impact of large section beams on the yarn producer, George Glarner, also of the weaving division, spoke on tensions in warping of filament yarn.

James A. Roberts, another representative of the weaving division, told of new procedures in the weaving of filament rayon scrim fabrics, touching on the history of bonded scrim fabric, filament versus spun rayon, and the use of adequate bonding agents.

Testing and testing methods were described by Charles O. Werner of the technical records division, who explained the purposes of testing in terms of quality and process control, performance evaluation and trouble shooting.

The three-day seminar was brought to a close with a discussion of the styling of rayon and acetate fabrics by Rene Bouvet. Included in Mr. Bouvet's presentation was a review of an 800-sample collection of men's wear with details as to the number of times various fibers were found used either by themselves or in a blend.

Schools sending representatives were: Alabama Polytechnic Institute, Auburn, Ala.; Bradford Durfee Technical Institute, Fall River, Mass.; Clemson Agricultural College, Clemson, S. C.; Georgia Institute of Technology, Atlanta, Ga.; Institute of Textile Technology, Charlottesville, Va.; Lowell Technological Institute, Lowell, Mass.; New Bedford Institute of Textiles & Technology, New Bedford, Mass.; North Carolina State College, Raleigh, N. C.; Philadelphia Textile Institute, Philadelphia, Pa.; and Rhode Island School of Design, Providence, R. I.

Cotton Counts Its Customers

National Cotton Council estimates covering 418 end-uses for cotton, representing over 90 per cent of total domestic mill consumption, reveal a 382,000-bale increase in 1955 over the previous year.

The latest edition of the council's publication, "Cotton Counts Its Customers," also shows that men's and boys' shirts replaced sheets as the largest single outlet for cotton last year. A total of 563,000 bales were consumed in shirts, nine per cent over 1954. Sheets were in second position, using 540,000 bales, a decline of 9,000 bales. Draperies and upholstery cottons stayed in third place, but showed a 22,000-bale increase for a 529,000-bale total.

Other significant comparisons between the two years show: cotton consumed in men's and boys' trousers rose to 512,000 bales from 475,000; use of cotton by the automotive industry increased from 281,000 bales to 364,000; consumption in women's, misses' and junior dresses went up from 261,000 bales to 310,000.

At the same time, losses were noted in rugs and carpets where cotton's share of the market dropped from 303,000 bales to 289,000. Bags also showed a decline with cotton's use falling off by approximately 30,000 bales over the two-year period.

In the three major distribution categories of apparel, household and industrial, the council publication reports: in apparel, a total consumption of 3,540,000 bales in 1955, reflecting a 245,000-bale increase over the previous year; in household, a total of 2,734,000 bales, virtually the same

as in 1954; in industrial, a total of 1,954,000 bales, a seven per cent increase, or 131,000 bales more than 1954.

The council stresses that its latest figures are preliminary, and final estimates for 1954 will be released as soon as complete data becomes available from the government's Census of Manufactures. Final estimates for 1955 will be published in the 1957 edition of "Cotton Counts Its Customers." All baleage figures are computed on the basis of 478-pound net weight bales.

Copies of "Cotton Counts Its Customers" may be obtained on request from the National Cotton Council, P. O. Box 9905, Memphis, Tennessee.

Bur-Mil's Role In Education

Burlington Industries Foundation made available approximately a quarter of a million dollars in support of higher education during the past 12 months, it was disclosed recently. The figure brought to nearly \$2 million the total amount donated for educational purposes since the foundation was established ten years ago.

Up until last year the foundation's aid had been centered mainly in outright financial grants to colleges and universities, plus help to students through the James Lee Love Educational Loan Fund.

Last June Burlington substantially broadened its educational aid program with establishment of a comprehensive four-fold plan that embraced these additional types of aid: scholarships, matching scholarship grants to schools, matched alumni giving, and matching tuition in educational loan

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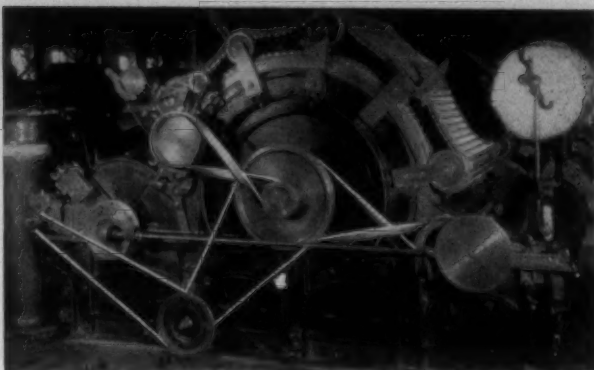
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cases. During the year the foundation expended \$234,400 in its combined program of financial assistance to higher education.

This broadened program was established in line with Burlington's recognition at that time of "an increasing awareness of the important role of higher education in supplying vigorous and intelligent leadership in our nation's business and civic life."

Announcement in June 1955 of the program's establishment was coupled with Burlington Foundation's "hope that it will help arouse and stimulate others to offer similar programs."

Commenting on the increasing educational aid being provided by industry, Spencer Love, chairman of the board of Burlington Industries, said, "It is gratifying to note that during 1955-56 American industry has poured millions of dollars into the support of our higher educational institutions, more than ever before in our history. Only through continued and increased help and support of this kind will our nation's schools and colleges be able to effectively provide more and better education in America."

During the 1955-56 school year Burlington's educational aid program made grants to 99 different schools and colleges in 22 different states. Also, aid was furnished to a number of associations of independent and church-related colleges which further broadened the base of aid. In addition 248 students were aided through the educational loan fund. Scholarships were established at eight different schools, and announcement was made this Spring of the establishment of seven more for the 1956-57 year to make a total of 15 awards at as many schools.

The unrestricted scholarships are awarded to students solely on the basis of leadership, scholarship and financial need. Selections are made by the schools through contact, experience and testing, and Burlington Industries takes no part in the selection.

Schools where scholarships will be awarded for the 1956-57 year are Washington & Lee, Davidson, Duke, Wake Forest, Lowell Textile Institute, Philadelphia Textile Institute and Virginia Polytechnic Institute. Those announced last year and already put into effect were at the Universities of North and South Carolina, Virginia and Tennessee, Clemson, Georgia Tech, N. C. State and A & T College.

During the decade since 1946 the Burlington Foundation has made outright grants to colleges and universities totaling \$1,565,385. During the same period a total of

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\$341,260 has been made available in the form of educational loans, making a total of \$1,906,654 in aid to education funds. Some portion of the educational loan funds have been repaid to the foundation by students who have completed their education and repaid the interest-free loans over a period of several years.

American Viscose On L-22 Bandwagon

The American Viscose Corp. has accepted American Standard L-22 as the minimum quality requirements for all merchandise displaying the Avisco Integrity Tag.

This announcement was made by Harry Dalton, vice-chairman of the board of directors of American Viscose, at a press conference in the offices of the National Retail Dry Goods Association. The N.R.D.G.A. is the sponsor of the standards.

N. C. Cotton Buyers Elect Bruton

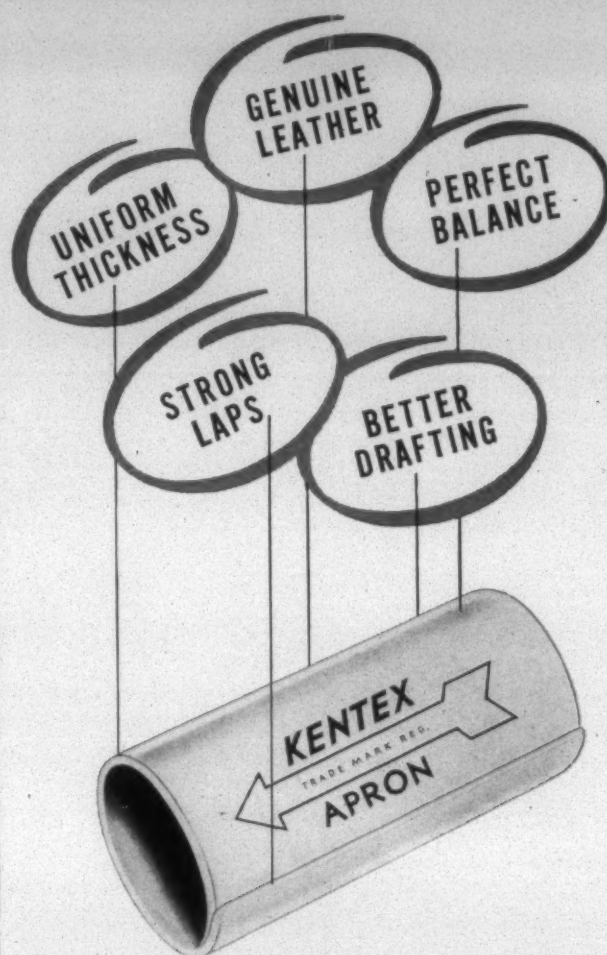
George H. Bruton of American & Efrid Mills Inc., Gastonia, N. C., has been elected chairman of the Cotton Buyers and Classers Division of the North Carolina Textile Manufacturers Association. Mr. Bruton, whose election came at the group's second annual meeting recently in Asheville, N. C., succeeds Stiles Fifield, Fieldcrest Mills Inc., Spray.

B. O. Creekmore, Erwin Mills Inc., Spray, was elected vice-chairman. Named to three-year terms on the executive committee were J. D. Siewers, Washington Mills Co., Winston-Salem, and Fred C. Krueger, Johnston Mills Co., Charlotte. In addition to officers, the retiring chairman and Messrs. Siewers and Krueger, the executive committee is composed of D. B. Johnston, Shuford Mills Inc., Hickory; W. J. Richards, Cannon Mills Co., Kannapolis; and Sydney Bluhm, Cone Mills Corp., Greensboro.

Southeastern Personnel Conference

The 1956 Southeastern Personnel Conference will be held Sept. 12-14 at Duke University, Durham, N. C., according to an announcement by Frank T. de Vyver, conference secretary. The conference will open Wednesday night, Sept. 12, with a social hour and banquet. The banquet speaker will be Leonard R. Brice, director of industrial relations of the Black-Clawson Co., and president of the American Society for Personnel Administration.

Thursday morning's program will be devoted to community relations with case studies being given by R. K. Argo of Alabama Mills, Chauncey W. Lever of The Abney Mills and Erwin Mills Inc., and J. H. McDuffie of the



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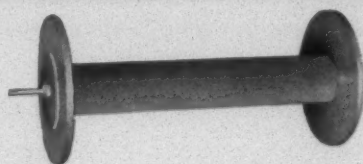
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General Electric Co. In the afternoon, Frank A. Constangy, Atlanta, Ga., attorney, will discuss the possible effects the A.F.L.-C.I.O. merger will have on Southern industry, and E. J. Hoechst of Fieldcrest Mills will discuss "A Pattern for Good Employee Relations."

On Friday morning, the topic "Listening and Talking to Employees" will be discussed by James L. Williams of Burlington Industries. This will be followed by a paper on "Influencing Employee Behavior" by Dr. C. A. Kirkpatrick of the University of North Carolina. The conference will close with a luncheon meeting on Friday at which time Dr. Dwayne Orton, editor of International Business Machine's publication *Think*, will be the speaker.

Karl Addresses N.C.V.T.S. Graduates

Textile school graduates can't get along in the industry on technical ability alone, William A. Karl, president of Firestone Textiles Inc., told last month's graduating class of the North Carolina Vocational Textile School at Belmont. In his topic "What Does the Industry Expect From You," he pointed out that the ability to take orders is a primary consideration. "Industry," he said, "expects you to take orders before you can give orders." Other demands of the industry cited by Mr. Karl included punctuality, health, thrift, continued study, loyalty, productivity and civic responsibility. The speaker was introduced by Harold Mercer, general manager of Firestone Textiles Inc., Gastonia, N. C.

One member of the graduating class, James R. Young, Carter Traveler Co., Gastonia, was given special recognition for having completed courses in yarn manufacturing and weaving and designing with a straight "A" record. He was presented a special award sponsored by the Textile Veterans Association of New York.

P.T.I. Awards Honorary Doctors Degrees

Three honorary degrees of Doctor of Textiles were awarded by the Philadelphia Textile Institute last month at the school's 73rd commencement exercises. Receiving the degrees were Robert T. Stevens, president of J. P. Stevens & Co. Inc.; Malcolm E. Campbell, dean of the School of Textiles, North Carolina State College; and F. Everett Nutter, former vice-president of Goodall-Sanford Inc., and a member of the P.T.I. board of trustees. Seventy-eight students, including 22 foreign students, were awarded degrees and diplomas at the graduating exercises.

Herman Cone Scholarships Established

The establishment of The Herman Cone Memorial Scholarships, to be awarded to three outstanding students in the School of Textiles at North Carolina State College, was announced June 13 by Mrs. Herman Cone of Greensboro, N. C., president of The Herman Cone Family Foundation Inc.

Mr. Cone, who died in 1955, was a nationally-known textile executive and leader. He was an officer of the N. C. Textile Foundation for many years and was personally interested in the progress of N. C. State's Textile School. Other members of The Herman Cone Family Foundation Inc. are Mrs. Cone's two sons, Herman Cone Jr. and Alan Cone, both of Greensboro.

Consisting of three annual awards of \$500 each, the scholarships will be given to a sophomore, a junior and a

senior in the School of Textiles at N. C. State. All recipients must be North Carolina natives. Winners will be chosen by the college's textile scholarship committee on the basis of scholastic achievement, character and need. Each recipient will continue as holder of his scholarship until graduation, if his performance is satisfactory.

Acknowledging the scholarships, Textile Dean Malcolm Campbell said, "These scholarships are a splendid memorial to our great friend, Mr. Herman Cone, who was one of the nation's most prominent and forceful textile executives. They should do much to attract some well-qualified young men into an industry that is demanding textile graduates for future positions of leadership, to a far greater extent than our textile colleges are now providing."

Textiles At The Museum Of Modern Art

More than 180 fabrics manufactured by 111 firms and craftsmen have been selected for the exhibition "Textiles U. S. A.," which will be on view at the Museum of Modern Art in New York City from Aug. 29 through Nov. 4. The exhibition is being staged as a tribute to American design in the field of textiles. All fabrics selected were produced in the past ten years, and were chosen on the basis of esthetic qualities. Examples were drawn not only from the larger mills in the country, but also from workshops of handweavers and designers. It marks the first time the Museum of Modern Art has devoted a major show entirely to modern American textile products. It is hoped the exhibition will go on tour after the New York showing.

To Study Crimp In Man-Made Fibers

An industry-group sponsored project to study crimp in man-made fibers is being organized by Textile Research Institute of Princeton, N. J., according to an announcement by Dr. John H. Dillon, director of the institute.

Proposals have been sent to 40 T.R.I. member companies, all of them either producers or processors of man-made fibers, to join in sponsoring the co-operative project. It is expected that most of these will send representatives to a project organizational meeting planned for June 28 in the new Edward T. Pickard Seminar Room at the institute.

It is proposed in this project to study the effects of fiber crimp on the properties and processing performance of the various man-made fibers. In particular, it is planned to include four representative fiber types such as viscose rayon, an acrylic, a polyamide (nylon), and a polyester (Dacron). Model fibers at several levels of fiber diameter, crimp frequency and crimp amplitude will be prepared and manufactured into fabrics. Processing performance and fabric quality will then be evaluated.

Man-made fiber producers have for many years been in the habit of crimping their fibers to improve drawing and spinning behaviors. Relatively little is known, however,

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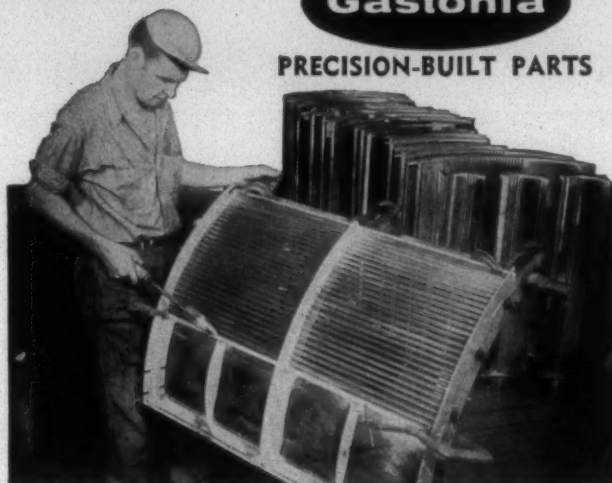
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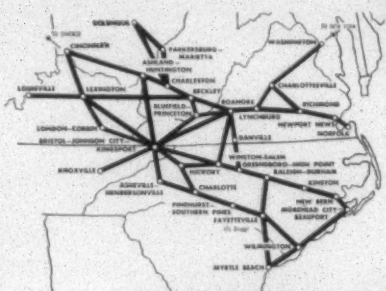
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regarding the amount of crimp which is most desirable for optimum performance, or the effect which this crimping has on other fiber properties. Crimp is gradually removed or lost during processing so that the factor of crimp retention is also of considerable importance to the processor.

Recent studies at T.R.I., supported by the Wool Research Group and also by the Office of Naval Research, have emphasized the importance of crimp as a factor in the processing and mechanical behavior of textile fibers. In particular, it has been found with wool that crimp is strongly related to spinning efficiency, yarn and fabric quality, and chemical reactivity. For example, it has been shown that a high crimp wool not only spins better than a low crimp wool of the same fineness, but also produces fabric with improved handle, dye receptivity and resistance to acid degradation.

The crimp project is planned to provide important answers to questions relating to this property on an accelerated schedule which will yield results within a three-year period. Sponsoring firms will have initial and immediate access to the data and conclusions obtained.

Flame-Retardant Treatments For Cotton

Two effective flame-retardant treatments for cotton fabrics have been combined into a single treatment which is more efficient than either alone. Details of the process have been published recently by research workers who developed it at the Southern Utilization Research Branch of the Agricultural Research Service, U.S.D.A., in New Orleans, La.

One of the processes utilizes tetrakis(hydroxymethyl) phosphonium chloride, frequently abbreviated to THPC, and the other is an emulsion of bromoform-triallyl-phosphate polymer (BAP for short). U.S.D.A. chemists found that the two treatments can be applied simultaneously to the fabric from a single bath. A basic proportion of 65 per cent THPC resin and 35 per cent BAP emulsion, found generally satisfactory, can be varied to meet special requirements.

The vertical flame test and the "match test" were used to gauge effectiveness of the treatment. For the match test, a strip of cloth one-fourth inch wide and ten inches long was suspended vertically in a draft-free area. Attempts were made to ignite it with a match or other small flame held usually for about six seconds. If the strip did not burn on removal of the flame it was rated "excellent." Sateen and twill, eight-ounce weight, were classed "excellent" after six launderings; after 12 launderings these materials rated "good," that is, although they flickered and burned, the fire went out in the bottom three or four inches. Print cloth of four-ounce weight failed the match test with an 18 per cent add-on, by weight, but rated "excellent" through one laundering, and "good" through six launderings with a 25 per cent add-on.

Tear resistance varies with the type of fabric treated. That of twill remains practically unaffected by the treatment, while sateen of about the same weight showed marked initial loss, but after 12 launderings tear resistance of the treated sateen is 90 per cent of the untreated.

The treatment was developed in co-operation with the Army Quartermaster Corps' Research and Development Command, Natick, Mass., with funds supplied in part by the Office of the Quartermaster General. Since development of flame-resistant fabrics for military use was one of the objects of the investigations, most of the work was done on eight-ounce cotton twill and sateen of the types used

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in military garments. The process has many advantages, however, for application to civilian goods. Increase in weight is not great enough to be objectionable; add-ons of about 18 per cent are required on eight to nine-ounce fabrics for a high degree of permanent flame resistance. Lighter fabrics require a higher add-on to obtain maximum flame-resistance. Appearance and hand of the treated fabric show little if any difference, and in some cases may be considered to be improved.

As The Sun-Hour Sinks In The West

A dramatic report and exhibit on the results of 18 months study on the causes of irregularities in the fading and evaluation of sunlight tests of the American Association of Textile Chemists and Colorists was recently presented by Charles H. Schmitt, of Sandoz Chemical Co., chairman of a special task group of the A.A.T.C.C. executive committee on research, which has been investigating the problem.

The use by industry of hours, sun hours or ultra-violet hours as a yardstick for testing sunlight fading is a "snare and delusion," Mr. Schmitt said. A sun-hour is a unit of wide variation, he pointed out, and the problems connected with sunlight testing can be eliminated by using the Langley heat energy unit in conjunction with A.A.T.C.C. Blue Standards, instead of the variable "sun-hour."

Mr. Schmitt's group reported the present A.A.T.C.C. sunlight testing method was not being properly interpreted, and was therefore the cause of: (1) improper rating of fabric quality, with regard to color fastness; (2) poor

reproducibility at individual test labs and stations; (3) poor correlation between different labs and stations; and (4) poor correlation of sunlight tests with Fade-Ometer tests—a point of great importance in quality control.

These conclusions, Mr. Schmitt pointed out, confirm the work and opinions of the association's general light committee, which noted in 1950 that there were a number of reasons for irregularities in test results, including temperature and humidity.

While Mr. Schmitt's task group, he said, proved the cause of the trouble more than a year ago, it has refrained from publicizing the data until it could offer a solution to the problem.

Some Fastness Tests Out Of The Blue

The executive committee on research of the American Association of Textile Chemists and Colorists has objected to the use by any organization of its recommended A.A.T.C.C. test procedures in any form but that officially published by A.A.T.C.C. as the proper form.

The A.A.T.C.C. policy research committee, meeting recently in Philadelphia, officially asked any group using the association's test procedures to refrain from referring to them as A.A.T.C.C. tests if any part of the test had been modified.

In a resolution passed at its meeting, the committee stated: "The executive committee on research, taking cognizance of the fact that some organizations are performing fastness tests on textiles, using test methods designated as being standard A.A.T.C.C. test methods, where the

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methods do not actually conform with A.A.T.C.C. recommended procedures, goes on record as stating that such different or modified methods should not be referred to as A.A.T.C.C. methods, and requests that such references be omitted."

The committee also adopted a new set of Blue Standards for industry use, and offered to make these available to industry members who contact the A.A.T.C.C. secretary, at Lowell Technological Institute, Lowell, Mass. Frank Rizzo, of the Quartermaster Research and Development Command, Natick, Mass., who directed the preparation of the new Blue Standards, was commended for this excellent work.

The committee also heard encouraging reports from the corporate membership committee on revenue collected for research purposes, and from the national research advisory committee, which has been active screening proposals for future A.A.T.C.C. research activity.

Charles A. Sylvester, of the Du Pont Co., chairman of the association's technical committee on research, referred in his report to a special wash and wear report presentation by Dr. George S. Wham, of the Goodhousekeeping Institute.

Other reports made to the technical committee on research the next day included that of the national stream pollution committee, which reported continued progress in research on textile waste problems, and a report of the committee on colorfastness to stoving, which recommended that its tentative test method 9A-54 be adopted as a standard test method. Committee members acted to approve the method as a standard.

Bur-Mil's Newest Weave Shed

Speed is one of the greatest single factors in the highly competitive textile industry. Styles must be up to the minute. And to see that they are, Mooresville Mills has devised a unique time-saving device.

Instead of the customary four to six weeks normally required, Mooresville weaves in one or two days samples of new fabric patterns on tiny hand looms right in the New York sales offices.

Customers interested in the company's line, or in having special patterns made to order, receive samples quickly. The customary method of turning out samples on production looms at the company's plant in Mooresville, N. C., would mean a wait of a month to six weeks.

Wool Consumption And Stocks—May 1956

The Bureau of the Census, U. S. Department of Commerce, reports that fiber consumption on the woolen and worsted systems during the month of May was two per cent below the April rate and seven per cent above that of May 1955. The weekly average raw wool consumption during May was 9,029 thousand pounds (scoured basis), or three per cent below the April level and seven per cent above

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that of May 1955. The rate of consumption of carpet class wool decreased five per cent compared to the previous month and increased 11 per cent compared to May 1955, while consumption of apparel class wool was approximately one per cent below the April level and five per cent above that of May last year. Consumption of fibers other than raw wool averaged 6,216 thousand pounds a week, or approximately one per cent below the April average and eight per cent above May 1955.

Plans Laid To Salvage Bale Ties

Plans for salvaging used cotton bale ties to ease the critical shortage brought on by the steel strike were outlined to representatives of the cotton processing industry recently at a special meeting in Greenville, S. C. The meeting, called by the National Cotton Council, was attended by some 50 cotton buyers, compressors, ginner and crushers. Cotton buyers for 30 mills pledged their support in the program, and said they would co-operate in expediting return of the used ties and buckles to ginner and compressors. A survey will also be made to ascertain mill inventories of used ties and the American Cotton Manufacturers Institute will initiate a program to assure equal distribution of ties.

"We estimate that the ties on hand before the steel strike plus expected imports of 12,000 to 15,000 tons of ties will take care of only about two-thirds of this year's cotton crop," Claude Welch, an official of the National Cotton Council, told the Greenville meeting. "We hope this salvage program will go a long way toward making up the balance of our needs."

Some 63,000 tons of steel bale ties and buckles will be needed for this year's estimated 14 million bale cotton crop. The only two steel companies that make ties in this country are Atlantic Steel Co. at Atlanta, Ga., and Tennessee Coal & Iron Division of the United States Steel Corp. at Birmingham, Ala. Atlantic Steel has been shut down by the steel strike, and Tennessee Coal & Iron had been closed previously by a rail labor dispute. "There was some consideration of substituting aluminum ties," Mr. Welch reported, "but most of the group thought the price prohibitive." He said aluminum alloy ties would cost nearly five times as much as steel ties.

Cotton Consumption—May 1956

According to figures released by the Department of Commerce, cotton consumption during the month of May amounted to 713,940 bales. This was under the 721,577 bales consumed in April of this year but a gain over the 704,029 figure of May 1955. Daily average consumption totalled 35,697 bales, with 33,844 bales consumed daily in the cotton-growing states as compared with 1,618 per day in the New England states.

Stocks on hand totalled 15,329,249 bales at the end of

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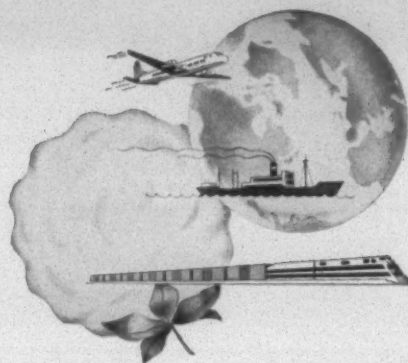
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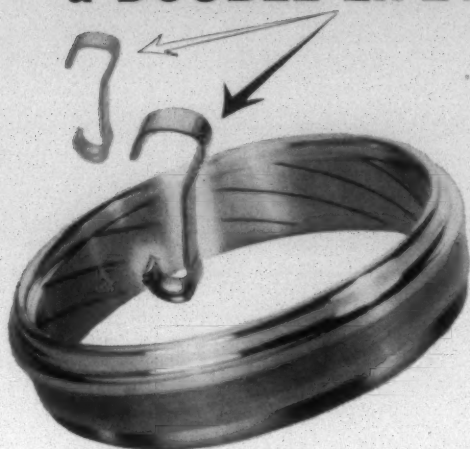
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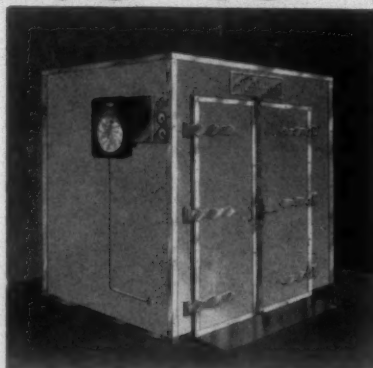
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the month, as compared with 16,266,864 bales at the end of April and 12,183,127 at the end of May 1955. Consuming establishments had 1,420,476 bales on hand, with 13,908,773 bales in public storage.

At the end of the month there were 21,926 thousand cotton-system spindles in place, very nearly the same as during the previous month and also during May 1955. Active spindles numbered 20,796 thousand, a figure which also reflects little change from the previous periods. The active spindles were operated 9,793 million hours at 139.6 per cent capacity based on a 16-hour work day, five work days per week.

Broad Woven Goods—First Quarter 1956

Production of broad woven goods of man-made fibers and silk was 636 million linear yards during the first quarter 1956, the Bureau of the Census reports. This was four per cent below the fourth quarter 1955 output and three per cent below that for the first quarter 1955. Production of rayon and acetate fabrics decreased four per cent during the first quarter and was approximately the same percentage below the output for the first quarter of last year. However, the production of 100 per cent filament rayon and/or acetate fabrics increased two per cent during the first quarter 1956. Nylon fabric output was 14 per cent below that of the fourth quarter 1955 and 15 per cent lower than the output for the first quarter of last year.

Export Subsidy On Cottons After August 1

The U. S. Department of Agriculture has announced that, starting Aug. 1, exporters of "cotton products" will be given cash subsidies based on the amount of cotton in the products shipped out of the country. The subsidies will be paid on exports of cotton textiles, cotton yarn and spinnable cotton waste manufactured from American upland cotton, the department said. The term "textiles" may or may not cover apparel and similar cotton products, officials said. The new program is aimed at offsetting the difference in price between domestic raw cotton and that sold for export.

The department said the extension of the benefits of the export program to cotton products, as announced May 21, is designed to protect the competitive position of the domestic cotton industry in relation to the sales of cotton products manufactured abroad from American cotton purchased at the export prices. The department has sold nearly 2.5 million bales of the cut-price cotton for export on a bid basis. This raw cotton cannot be exported before Aug. 1.

To handle the subsidy program, the department is setting up a special office in New York City. The office will be called the Commodity Stabilization Service Cotton Products Export Office, and will be staffed and in operation by Aug. 1.

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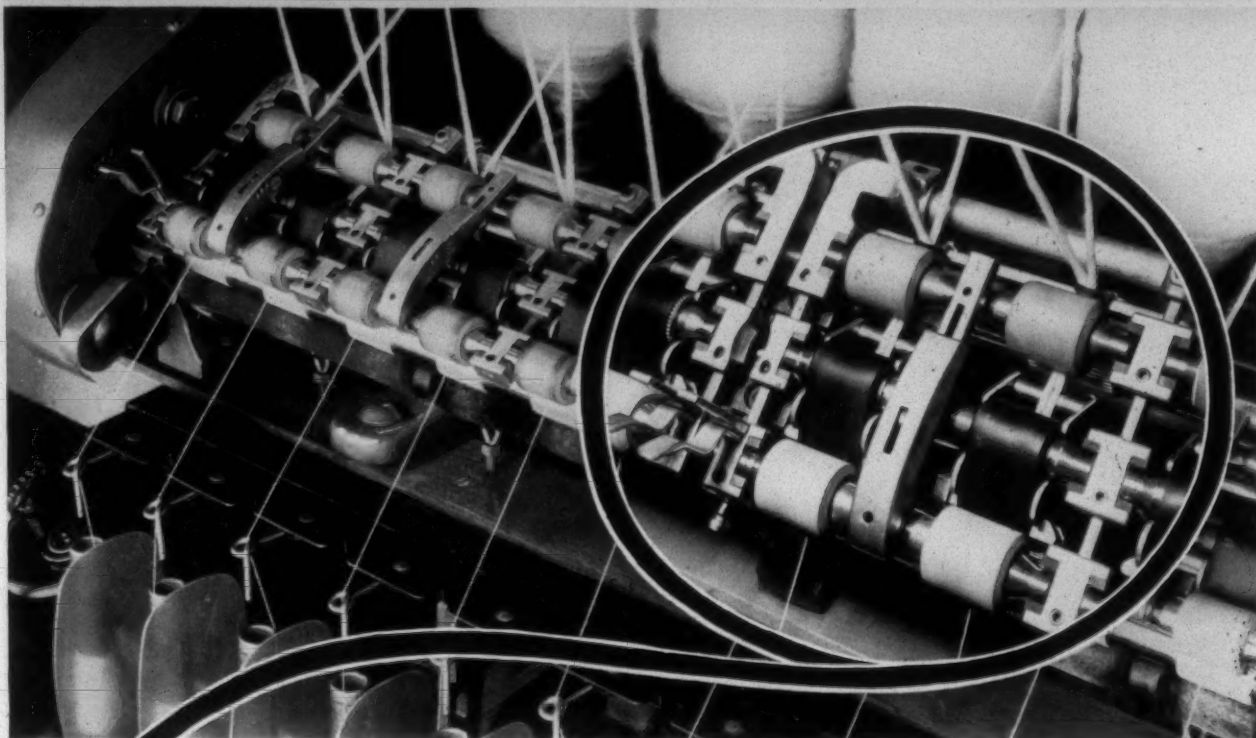
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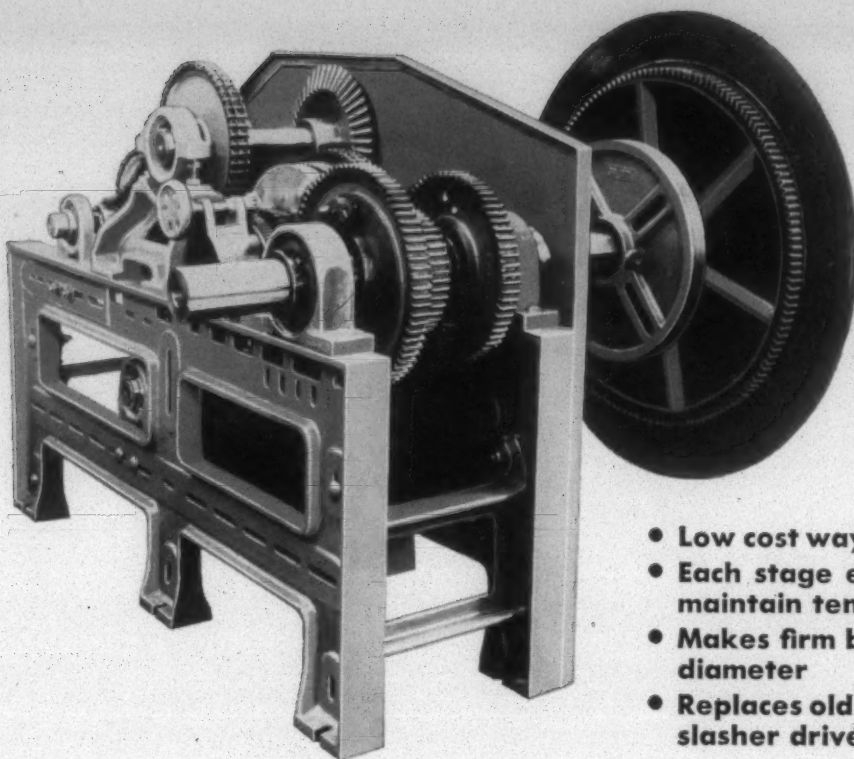
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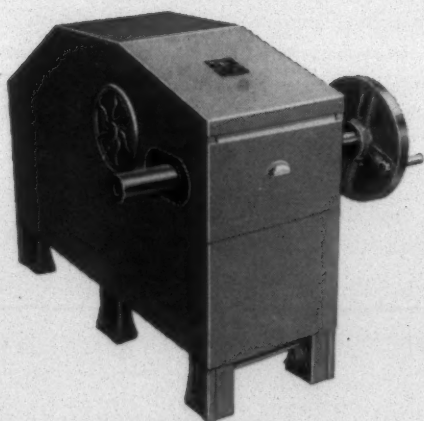
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